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AMERICAN PSYCHOLOGIST

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In this Issue

- Toward a Technology of Human Behavior for Defense Use. CHARLES W. BRAY 527
- Present Status of Psychological Research and Training in Hypnosis: A Developing Professional Problem. C. SCOTT MOSS, JAMES C. LOGAN, AND DOROTHY LYNCH 542
- Soviet Methods of Character Education: Some Implications for Research. URIE BRONFENBRENNER 550
- Counseling and Psychotherapy: Split Personality or Siamese Twins. FORREST L. VANCE AND THEODORE C. VOLSKY, JR. 565
- Internships for Doctoral Training in Clinical Psychology Approved by the American Psychological Association. SHERMAN ROSS 571
- Comment 573
- Psychology in Action 577
- Psychology in the States 579
- Notes and News 582

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TOWARD A TECHNOLOGY OF HUMAN BEHAVIOR FOR DEFENSE USE¹

CHARLES W. BRAY

Smithsonian Institution

IN the fall of 1957 the Advisory Panel on Psychology and the Social Sciences of the Office of the Director of Defense Research and Engineering initiated a series of planning studies of the research on human behavior required to meet long-range needs of the Department of Defense. The general philosophy was to define research areas relevant to future military needs, "ready" to advance in the next 10 years, and particularly ready if given a new and different kind or level of support than those areas were then receiving.²

In May 1959 the research planning studies were transferred to the Smithsonian Institution under contract. To complete the studies, the Smithsonian established a Research Group in Psychology and the Social Sciences, which proposed a definition of the objective of Defense support of long range research on human behavior and recommended specific subject matter emphases and methods of support for the topics emphasized.³

¹ This paper was prepared under Contract Nonr 1354(08) monitored by the Psychology and Social Sciences Division, Office of Science, Director of Defense Research and Engineering. The opinions expressed are those of the author and not necessarily those of the Smithsonian Institution or the Department of Defense.

² The initial studies are reported in Melton, A. W. (Ch.), Cottrell, L. S., Geldard, F. A., Hunt, W. A., & Thomson, C. A. H. *Report of the Ad Hoc Advisory Group on Psychology and the Social Sciences*. Washington, D. C., Office of the Assistant Secretary of Defense, Research and Engineering, December 19, 1957 (For Official Use Only).

³ The recommendations are reported in *The Technology of Human Behavior*. Washington, D. C., The Smithsonian Institution, July 1960 (For Official Use Only). The work of the Research Group was guided by P. H. Mitchell and the Steering Group of the Defense Advisory Panel in Psychology and the Social Sciences. During most of the active work, the Steering Group was composed of Dael Wolfe, Chairman, J. L. Kennedy, Klaus Knorr, A. W. Melton, I. deS. Pool, and C. A. H. Thomson. The Smithsonian's Research Group was composed of E. F. Borgatta, C. W. Bray, R. L. Chapman, W. P. Davison, C. P. Duncan, W. Edwards, J. H. Ely, E. A. Fleishman, R. M. Gagné, H. Hake, R. W. Heyns, Daniel Howland, Morris Janowitz, H. H. Kendler, William Kornhauser, K. D. Kryter, L. H. Lanier, J. F. Lanzetta, J. V. McConnell, J. E. McGrath, J. G. March, R. B. Miller, C. T. Morgan, C. G. Mueller, G. J. Rath, H. W. Riecken,

The recommendations have been accepted in broad principle within the Department of Defense. Increased support should be given to technologically oriented long-range studies within the general fields of human performance, military organization, and persuasion and motivation. Longevity funding of a relatively few, relatively large-scale projects within the areas of emphasis should supplement present support based primarily on dispersed, relatively small, relatively short-term contracts and grants. Many considerations of feasibility and relationships with previously established programs will necessarily affect implementation of the more specific recommendations, particularly recommendations for the establishment of several full-scale Defense laboratories for the study of human performance.

Although the official reports of the Research Group cannot be made available to the general public, the scientific content is open for information and discussion. This content is described below, in terms, first, of the general objective of defense research in psychology and the social sciences; second, the special research areas which are judged to be ready for advance if given an additional or a different kind of support than they are now receiving; and, third, the kind of support needed in order to advance these areas most rapidly.

THE OBJECTIVE OF DEFENSE RESEARCH IN PSYCHOLOGY AND THE SOCIAL SCIENCES

Formulation of the general objective of long-range defense research may be approached by trying to answer two questions: What kind of problems will the Defense Department face in the future for which research in psychology and the social sciences may help to provide the answers? How would the products of successful research be put to use?

Below are a few examples, drawn almost at random from a very broad possible list, of the many human and social problems which must be faced by the managers of the Defense establishment at

J. W. Riley, Jr., W. L. Schramm, Philip Selznick, and F. L. Strodtbeck.

the present time:

Human Use of Complex Hardware	Social Problems
Command and control systems	Personnel turnover and training
Space Samos, Midas, Tiros, etc.	Slow management decisions
Missiles	Effects of inadvertent launch
Maintenance Vulnerability Readiness without realistic training	Deterrence The understanding of defense problems by our people
Limited war	
Communications Mobility	The impact of defense actions on foreign populations

Commanders and their specialist staffs, system engineers, personnel specialists, manpower and organization specialists—these managers of the military establishment face critical problems in the column on the left above, problems in the use by human beings of complex hardware. A common problem is to improve the human use of information processing systems.

And the human problems associated with the use of new equipment are perhaps easier of management solution than the current social problems, exemplified in the list on the right above: personnel turnover and training, slow decisions, deterrence, inadvertent launch, etc. These are problems of the personnel system and of the cold war. The two lists together suggest the nature of the difficulties with people which military managers will face in the future. In every example, a problem exists today because traditional management solutions are no longer appropriate to the problem.

The general problem for Defense managers is the effect of change on the people of the military establishment. The management of people is a high art under the best of conditions. It depends on the manager's ability to use the traditional wisdom and common sense about people that have been accumulating over centuries of military experience. It depends also on the manager's ability to improvise new solutions as conditions change. When conditions change, there is an inevitable strain on the art of management.

It is now a truism to say that the conditions faced by Defense managers are changing rapidly today and changing more rapidly every year. The significant changes for behavioral scientists are the expansions of the military environment into a world of machines and into new social settings. The manager of people, today, must constantly anticipate the impact of new machines and new social settings on the people with whom he deals.

Thus, the general form of the military research target for psychology and the social sciences is to lay the basis for an overall increase in the sophistication and inventiveness with which Defense management meets the expansion of military operations into a world of machines and into new social settings.

For several generations, Americans have been justifiably proud of their sophistication and inventiveness about the production of physical objects. In recent years, Americans have had every reason to become proud of their sophistication and inventiveness about new engineering developments. These accomplishments rest on the state of the art of engineering, on a technology based on advances in the physical sciences.

Americans need to recognize, and to act on the recognition, that Defense managers do not now have the basis for sophistication and inventiveness about people that they have for sophistication and inventiveness about production or the development of weapon hardware. Thus the key concept behind the reasoning and conclusions expressed here is that Defense management needs a technology of human behavior based on advances in psychology and the social sciences.

A technology of human behavior may be defined as including:

New concepts and attitudes about people—based on advancing scientific theory. In this age of computers it will be particularly valuable if new concepts can be expressed mathematically.

Proven techniques to deal with people and to get precise information about them—based on advancing scientific methodology.

Tested information about people—available on file, in handbooks, and in the memories of behavioral scientists who serve on the staffs of the Defense managers. Technological information is information based on controlled observation, and, preferably, is information expressed in formulas, tables, and graphs. That is to say, it is not only

tested but it is quantitative information that is needed. With tested, quantitative information come tested products based on that information.

In recent years, Defense management has been helped by the technological development of, for instance, aptitude testing which makes it possible for educational and training managers to support the high degree of specialization required of people in a world of machines. Defense management has been helped by advance in the technology of human engineering which, when allied with operations research, servo theory, and information theory, has helped to establish the modern system concept. Defense management has been helped by the techniques of attitude measurement. Technological development has begun for psychology and the social sciences and experience has proved its usefulness.

The broad objective, then, is to move ahead on the technology of human behavior.

With this broad objective defined, the current status of research in psychology and the social sciences was reviewed. A search was made to define those areas of behavioral science research which not only are relevant to a military technology but also are "ready" to advance. Particular attention was paid to research areas which were in need of a new or different kind and level of support than they were receiving.

Upwards of 40 possible research programs were evaluated in terms of a number of stated criteria. Rejected from special consideration in the present context was a program in physiological psychology, for example, on the grounds that the support methods current at the time (1957) were appropriate and the expected level of support from all sources would be relatively high compared to other possible programs. Also rejected on the same grounds were special programs in the psychology of learning, as such, and in aptitude and personality testing, as such. However, in these, as in many other cases of "rejected" programs, opportunities for theoretical advance are evident below within the framework of the selected programs.

Of the 40 or more possible programs, six emerged as warranting special attention. The selected areas were:

- Human performance
- Man-machine systems
- Decision processes in the individual

Team functions

The adaptation of complex organizations to changing demands

Persuasion and motivation

Task Groups were appointed to study each area in detail. When their separate reports were reviewed as a whole it became apparent that there were striking similarities as well as differences in the research proposed under the first four headings. In varying degrees, stress was placed on the need for simulation, multivariate, and taxonomic research. However, these common emphases were placed in the context of three rather basically different scientific approaches to the common problem of human performance. Thus, in the final report, four of the above programs were consolidated into a single program on Human Performance, subdivided into programs on Man-Machine Systems, Intellectual Skills, and Team Functions. The programs proposed by the other two Task Groups were accepted as stated in their reports. The final conclusions are described below.

HUMAN PERFORMANCE

For human performance the primary concern is with performance in a world of machines. In a world of ever-increasing automation, some of man's functions are being restricted; others, particularly those emphasized below, are being expanded.

A primary, continuing function of man as a component of a highly automated system is that of information processor. Man continues to receive information, to perceive temporal, spatial, and abstract patterns in it, to categorize and structure it in a form suitable for his own use and for transmission to other system components, human or nonhuman.

As a system component, man also makes decisions. He makes decisions each time that he perceives, categorizes, and transmits information. He decides how machines are to be used.

As a system component, man operates as a member of a team of specialized men, for each of whom the roles of information processing and decision making are being emphasized by engineering technology.

For these functions, Defense managers need to have at hand detailed knowledge of men's engineering characteristics and men's inventive or reprogramming characteristics.

Men's engineering characteristics are those

characteristics which a system planner must know about when he designs a man-machine system. They are characteristics similar in all respects to the characteristics of machines. System planners and personnel men need comparable information about people.

In a world of machines, Defense managers also need to know about men as inventors. Reference, here, is not limited to the great, unique, inventive genius but emphasizes, rather, the more common form of inventiveness, perhaps better described by the modern term, the reprogrammer, than by the older term, the inventor. It is this characteristic which is the best reason for including men as components in our otherwise highly automated systems. It is this characteristic which makes systems grow in effectiveness in spite of unexpected change in the conditions under which the system operates.

Men's engineering characteristics and their reprogramming characteristics need to receive more intensive study than they have yet been given. Three approaches to them are desirable: a system approach, an individual approach, and a team approach. For each approach, a new kind of laboratory is needed.

A Man-Machine System Laboratory⁴

A man-machine system may be defined as an organization whose integral components are men and equipment, characterized by a common purpose, and tied together by an information flow network. The complexity of modern systems is such that it is very difficult to estimate their military effectiveness from a knowledge of their parts in isolation.

It is particularly difficult, of course, to estimate the effectiveness of a whole system when there is so little suitable information available about the properties of an entire class of components, the

men involved in all military systems. Knowledge of man's properties is inadequate.

The inadequacy of knowledge about men has accentuated the military trend to system automation. There is reason for concern lest the preoccupation with automation lead to the replacement of men by expensive equipment even in those functions in which men are superior to machines, as, for example, in the detection and recognition of complex patterns in information, in the selective recall of material from long-range storage, and in the intellectual reprogramming which provides system flexibility.

Although, in general, automation has been very successful in supplementing and replacing men, experience to date shows that it frequently creates its own demands for new and exact input information to be supplied by other men, for the managerial skills of scheduling and planning, for the construction of computer programs, and for good human judgment in decisions about factors not yet successfully included in computer programs. Somewhat paradoxically, therefore, automation often, perhaps usually in competitive situations, increases the need for effective human performance at the same time that it replaces some of the men used in modern systems. The trend to automation is not a good reason for resting content with our low level of knowledge about men in man-machine system relationships.

System research and analysis appear to have grown out of the many significant contributions of operations research in World War II and after. Operations research assisted materially in the solution of complex World War II problems of effectiveness and cost estimation for military and industrial operations. In the postwar period, the methods of operations research, with their emphasis on the manipulation of mathematical models, were extended to system analysis as a tool in planning and developing future systems.

Operations research and system analysis studies have been developed and led by mathematicians, physical scientists, and engineers. As a result, mathematical models of man-machine systems sometimes have been oversimplified with respect to men (e.g., when it has been assumed that certain human functions are linear), an oversimplification which has been almost inevitable in any case because of the limitations on the knowledge of men's properties. Available mathematical

⁴ This section of the report is based on Miller, R. B. (Ch.), Chapman, R. L., Ely, J. H., Howland, D., Kryter, K. D., & Rath, G. J. *Report of the Task Group on Design and Use of Man-Machine Systems*. Washington, D. C., Smithsonian Institution, November 15, 1959 (For Official Use Only). Related discussions appear in Morgan, C. T. (Ch.), Fleishman, E. A., & Mueller, C. H. *Report of the Task Group on Human Performance Capabilities and Limitations*. Washington, D. C., Smithsonian Institution, May 27, 1959 (For Official Use Only), and in Fitts (1951 and in press), McGrath, Nordlie and Vaughn (1959), and Taylor (in press).

models have particular difficulty, furthermore, in dealing with the reprogramming in which the human components of systems indulge.

At the System Development Corporation, at Ohio State University, and elsewhere, independent long-range research with the emphasis on men in systems has been in progress for some years but on a small scale relative to the magnitude of the problem. There is a need for a major effort in this field.

In order to meet the needs of system designers and system analysts for knowledge about men as system information processors, three areas of research require development. The areas are simulation technique, system theory, and inventive research on men.

The way to avoid mathematical oversimplification and to check the accuracy of assumed constants in system analysis, it is commonly recognized, is through physical simulation of systems (or subsystems) as wholes, supplemented by actual tests of critical system operations. In a general sense, this is to say that the mathematical, solution-oriented approach needs to be supplemented by the laboratory, variance-oriented approach. Thus there is need for a laboratory simulation facility designed to permit general studies of the information-processing activities of men in man-machine systems.

A review of current research and development effort on men in man-machine systems suggests that the effort is too scattered and too directed to the solution of immediate problems to lead to a guiding system theory. There is in sight no broad-scale "map" of how to intermesh human capabilities with system performance requirements and resources.

Contracts for system development do not provide the time or motivation to contractors for development of a theory of systems. Academic laboratories do not have the facilities or the concern for systems as whole. A focus, a center of effort, is needed with adequate facilities to produce the systematic, empirical background required for theory construction.

Of particular difficulty to system theory are the many criteria which are necessarily used today in evaluating system effectiveness. Typical criteria in current use are system accuracy and reliability, flexibility, autonomy, reaction time and rate of response, resources utilized, enemy resources neu-

tralized, resistance to obsolescence, safety, ability to recover from a catastrophe, and so forth. Even ethical and political criteria must somehow be taken into account. Although it may be difficult to find common denominators for these multiple criteria, some method is needed to deal conceptually with their interrelationships. And military research on human performance must be guided by known or expected relationships between system criteria and the subcriteria of human performance. The study of these relationships depends for effectiveness on laboratory use of the techniques of simulation.

Simulation is the key, not only to improved model building about men in systems but also to inventive research designed to increase human performance.

It is difficult to plan for invention. Nevertheless, significant recent advances have come through research involving simulation of system inputs to men, and measurement of men's output in relation to system dynamics. Some kind of theory or construct has guided such research. Frequently, the spontaneously adopted reprogramming of human beings operating a machine in a new or unexpected way is the guide to invention. The work on system training by Chapman, Kennedy, Newell, and Biel (1959) at the RAND Corporation and on "display quickening" by Taylor (in press) and associates at the Naval Research Laboratory exemplifies the kind of inventive research needed on man-machine relationships.

The directions in which future inventive research should go cannot be predicted far in advance. However, a few current problems can be mentioned as examples of points at which inventions to improve human performance are needed. One such problem is the design of displays for decision making. Another is the creation of a man-machine control language. A third is the problem of training when practice under realistic conditions is impossible.

Proposal—a Man-Machine System Laboratory. It is therefore proposed that a Man-Machine System Laboratory be established as a general, system simulation facility. The work of such a laboratory should be directed to improvements in simulation techniques, to system theory development, and to inventive research on man-machine relations. A well-equipped and staffed laboratory is needed in order to make substantial progress in the next

10 years; progress to date has been severely limited by the lack of facilities and appropriate staff support for key scientists in the field.

Roughly half the key scientific and engineering personnel in such a laboratory should be psychologists from the related fields of engineering psychology, the experimental psychology of perception, learning, and measurement, physiological psychology, and social psychology. The remainder should include engineers, mathematical statisticians, sociologists, physiologists, and operations research specialists. Included in the positions established should be a number for scientists and engineers who would work temporarily in the laboratory while on "sabbatical" leave from governmental, industrial, and academic positions, and a number of positions for internship training of junior scientists and engineers. Basic facility needs are, first, a high-speed, scientific computer with large storage capacity, highly flexible input-output equipment, and provision for multiprogramming; second, extensive model shops; and, third, space for system simulation.

Intellectual Skills Laboratory

Human intellectual skills are those skills employed by an individual in receiving information and using it in making decisions. An individual receives information and integrates it with stored information. He uses this information to generate alternative solutions to a problem, using the information either in a familiar, routine, habitual way, or in a novel manner akin to invention. Finally, he makes a decision, choosing among the courses of action that are available to him and creating new possible courses of action. One possible course, always, is to seek additional information. In this case the decision process takes on a cyclical, dynamic character and the goal often is modified in greater or lesser degree.

The receipt of information and its use in a familiar or habitual way are the subject matter of a proposed program of basic research on standards of human intellectual performance. The use of information in a novel way in decision making by individuals is the subject matter of a related, proposed program of basic research on the processes of decision making in the individual.

The two programs are closely interrelated in their concern with a basic understanding of individual intellectual processes; they require

scientists with common laboratory skills and techniques; these scientists need comparable facilities and equipment for their research. Thus, the two programs are combined in a proposed Intellectual Skills Laboratory.

*Standards of human intellectual performance.*⁵ A standard of human performance is the measured performance to be expected of men under standard reference conditions. For example, what is the probability that a man who is monitoring a set of dials can detect a change in them of specific amount in a time of given length? How does this probability change with the illumination and the form of the dials and pointers, with the work load, with the method and conditions of work, with fatigue, anxiety, or stress of various sorts? Do drugs change the probability? How does the probability change with specified differences between men in their aptitudes, training, or previous work experience?

It should be pointed out that the term "human performance standards," as defined and exemplified above, has little relation to the standardization of behavior that is sometimes attempted by the time and motion engineer or that is inherent in setting standards for piece work systems in industry. No doubt it would be convenient for systems designers and other military managers if human behavior could be standardized but, as the questions above imply, performance levels vary with conditions and people. Military conditions and military personnel cannot be standardized. Flexibility in meeting emergencies is the keynote of successful military operations; even in standard operations, personnel differences can only be reduced, not eliminated, by aptitude tests and training.

Although military conditions and personnel can-

⁵ The present proposal for a research program on standards of human intellectual performance originated in an informal paper by A. W. Melton. Related discussions appear in *ARDC Research Planning Objective 805A*, March 1958, and *ARDC Research Planning Document 780E* August 1959; Miller, R. B. (Ch.), Chapman, R. L., Ely, J. H., Howland, D., Kryter, K. D., & Rath, G. J. *Report of the Task Group on Design and Use of Man-Machine Systems*. Washington, D. C., Smithsonian Institution, November 15, 1959 (For Official Use Only); Morgan, C. T. (Ch.), Fleishman, E. A., & Mueller, C. G. *Report of the Task Group on Human Performance Capabilities and Limitations*. Washington, D. C.: Smithsonian Institution, May 27, 1959 (For Official Use Only); Kennedy (1951) and Rodger (1959).

not be standardized, it is necessary to effective planning that expected human performance be estimated. Systems can best be designed, the choice between alternative systems best be made, the question whether or not to automate best be decided, the need for quantities of system units in relation to costs and unit effectiveness best be calculated if expected human performance and expected variability under standard reference conditions are known.

Human performance standards are required also to facilitate the process of invention to improve human performance. Engineering invention today takes place on a background of an immense amount of rather precise knowledge about physical objects and processes. It is the exponential increase in such knowledge, at first slow, now increasingly fast, that gives meaning and validity to the statement that we have "invented a method of inventing."

The significant knowledge may be categorized by the single term "standards." The electronics inventor can operate effectively when he has at hand a great deal of knowledge about "standard" circuits, "standard" materials on which to improve, and "standard" tools of measurement which precisely define volts, amperes, watts, frequency, phase, etc. It is because standards of human performance are lacking that inventions about men are so few and so imperfect. Standards are needed for the engineering characteristics of men.

Until recently, the essential research difficulties in estimating expected levels of human performance have been three: first, the number and variety of variables affecting it; second, measurement of performance in useful terms; and, third, inability to generalize from measured performance on one task to expected performance on other, apparently related tasks.

We are by now reasonably competent in handling multivariate research and in using scaling and other newly developed measurement techniques. The difficulties in these respects are now chiefly difficulties of time and facilities only. However, our ability to generalize is another matter. The nature of the need suggests the directions in which to seek a research solution.

As indicated above, the trend of military development in the engineering of weapon and other equipment systems is constantly emphasizing man's role as an information channel. Thus it is

appropriate as a practical matter to concentrate our attention on expected standards of human intellectual performance in receiving information, emitting it, and processing it in ways which are, or can be made to be, habitual. It is also in such habitual tasks that we have the best chance at present to develop a systematic taxonomy of tasks which would permit us to generalize results.

Two approaches to a taxonomy should be pursued intensively and simultaneously. The first is the direct approach to human intellectual standards for pragmatically defined classes of tasks which are commonly recognized to have importance for future military systems.

For such classes of tasks, the direct effects and interactions of three kinds of variables need to be determined:

1. The primary characteristics of the tasks themselves; including the nature of the external inputs and loads, the required outputs, feedback, interactions with teammates, organizational constraints, the immediate work environment, etc.
2. The indirect working conditions which affect performance through boredom, fatigue, anxiety, stress, motivation, morale and attitudes, physiological status, etc.
3. The background factors; including aptitudes, personality, training, general experience, physique, and physiological status.

The second approach to a taxonomy is to attack the theoretical problems involved. The present pragmatic classifications of tasks can give way to improved classifications based on the common effects and interactions of the kinds of variables just listed, when these effects and interactions are generally established for many tasks. The validity of task classification can also be tested by factor analysis and transfer of training techniques. In effect, this is to say that a broadly useful classification of tasks can be developed as a product of advances in the general theory of human performance.

As task classifications become more meaningful, standard reference measuring tasks can be developed for widespread general use in research on the variables affecting human performance. The measured performance to be expected of different kinds of individuals when performing these reference tasks under various controlled conditions will be true and useful standards of human performance.

*Decision making processes in the individual.*⁶ The receipt of information and its use in a familiar or habitual way are the major concern of the research on standards of human behavior just described. Use of information in a novel way in decision making by individuals is the subject matter of the following.

The importance to the military establishment of understanding individual decision processes is almost self-evident. Probably the best reason for retaining men in some weapon systems, especially the systems of the future, will be to make decisions. These decisions will necessarily be made more rapidly, they will take into account a wider range of specialized information, and, not infrequently, they will be made at lower echelons of organization or operations than was the case in past times.

Within the science of human performance, research on decision processes has been relatively neglected, and may be considered as at least 25 years retarded, by comparison with knowledge about sensory, perceptual, and motor skills processes. Even so, there is evidence that a period of rapid acceleration in theory and research on decision processes was begun about 1950 and is continuing into the present. This recent acceleration shows a lack of internal balance of interest and effort, which is to be expected of a new field of endeavor. For example, a survey of 96 active projects on decision processes in the individual indicates that reasonably satisfactory progress is being made with respect to:

1. Attempts to construct models of the human thinking process.
2. Decision making in operational games and other group situations.
3. The definition and measurement of human aptitudes and traits as determinants of problem solving.

On the other hand, relative to importance, inadequate attention is being given to:

4. Learning and use of concepts.
5. Creative problem solving and invention.
6. Sequential decision making (in which successive choices influence what future information

⁶ This section is based on Gagné, R. M. (Ch.), Duncan, C. P., Edwards, W., Hake, H., & Kendler, H. H. *Report of the Task Group on Decision Processes in the Individual*. Washington, D. C.: Smithsonian Institution, December 1, 1959 (For Official Use Only).

becomes available and each choice contributes to the perception of a long-range, developing goal.)

In addition, appropriate facilities and staff are not yet available for a concentrated, long-range attack under the leadership of students of the higher mental processes on the adaptation of computers and scientists to one another in scientific decision making. On the one hand, there is much effort among mathematicians and engineers to design computers to simulate human mental processes in organizing data. On the other hand, the mental processes themselves are not understood in the scientific and mathematical sense. And simultaneously, little attention is being given to the delays and expense of communicating with computers when they are used in decision making about scientific data. The essential problem is to approach scientific decision making as a man-machine, scientist-computer, system.

Proposal—an Intellectual Skills Laboratory. An Intellectual Skills Laboratory for the study of individual men is proposed. The research topics in such a laboratory should be standards of expected human performance in the routine, habitual processing of information, and the nature of decision making in the individual who faces a novel situation.

Roughly half of the key scientific and engineering staff should be experimental psychologists from the fields of human sensation, perception, attention, concept formation, verbal habit, memory, learning, and problem solving. The remaining half should be psychologists from the fields of measurement and evaluation, and mathematical statisticians and electronic engineers. Provision should be made for key scientists on sabbatical leave from other institutions and for internship training of junior scientists. The laboratory should provide for the observation and measurement of the performance of large numbers of individual human subjects. In other respects, the laboratory facilities resemble those of the Man-Machine System Laboratory proposed above, except that the computer may be more modest.

*Team Functions*⁷

Teams are organized units of divided labor. They perform some specified set of tasks, as de-

⁷ This section is based on Borgatta, E. F. (Ch.), Lanzetta, J. T., McGrath, J. E., & Strodtbeck, F. L. *Report*

financed by the goals and policies of a larger organization, which is itself composed of many teams. Within the organization, teams are of various types. Each team has some degree of autonomy in performing its specified tasks.

This discussion assumes that teams are small groups, and concerns itself primarily with small groups which are embedded in, and partly, but not entirely, constrained by the larger organization of which they are a part. It also emphasizes teams for which the constraints on a team member from his equipment-derived tasks are relatively weak, whereas the interactions with other team members, considered not only as system components but also as human beings, are significant determinants of total team performance. In addition, it is to be noted that teams of military men, in a world of machines, are composed of specialists, each differing more completely in functions, and in skill and knowledge requirements, than was the case in the days when an Army team, for example, was composed of riflemen, all much alike to one another in functions.

Extensive and expensive effort to organize and train effective teams of men characterizes the military establishment. Large scale simulation facilities and very extensive practice exercises are developed for this purpose. In spite of the existence of many developmental projects, however, there is difficulty in generating current examples of programmatic, basic research supported by the military establishment on teams. It should be noted that few civilian activities have a need for generalizations applicable to a variety of teams; hence few support research on teams except in the area of "human relations."

For human relations, much basic research is in progress under the names "group psychology," "interpersonal relations," "social perception," etc. Other basic research topics of particular concern to the military establishment, however, are not well supported; these topics are the analysis and measurement of team performance, team composition and organization, and team training. Programmatic, laboratory support of these topics is proposed.

A current ongoing review of some 1,600 studies of small groups indicates that a primary research

problem for teams concerns the interactions of the many variables affecting team performance.

There has been almost no systematic research aimed at developing a comprehensive rationale for team tasks upon which measures of team effectiveness could be based. Fewer than 10% of the 1,600 studies surveyed deal with any measures of team effectiveness. Among these perhaps a dozen studies only have given major emphasis to systematic and generalizable measures.

Scientific progress in any area of team functioning is dependent on appropriate and generalizable measures or criteria of team effectiveness. Such criteria must express how well a team performs its assigned task, and separately, to what extent the team contributes to the overall mission of the larger organization of which the team is a part, as well as how the performance of individual team members is related to total team performance.

At the same time, it must be recognized that it is often inappropriate, particularly in "two-sided" tasks (those in which several team members or several teams cooperate, or are opposed as in combat), to evaluate performance only in terms of end product. In these cases, the concern is with those underlying team activities which maximize the probability of success; the concern is with "good form" in team work, to borrow a term from sports.

Basically, the problem of measurement of team effectiveness depends upon advance in the systematic classification of the underlying dimensions of team tasks. Without such classification, meaningful and generalizable measurements of team effectiveness and of the relations of team variables to effectiveness are impossible. As with individual intellectual skills, so too with team functions: task taxonomy is fundamental.

It seems obvious that team composition and organization are significant factors in team performance and, in the trivial sense that team members must have some minimal ability and training level, no doubt it is true. Nevertheless, it has yet to be convincingly demonstrated that this is the case. Common-sense beliefs about the matter are contradictory. Thus, top executive teams are formed with the utmost care in industry, scientific committee assignments are approached with caution until the membership is revealed, the right balance of individuals is sought at a dinner party, and failure in any of these group operations is

glibly attributed to inability of the individuals to "get along" with one another. Yet suggestions that military teams should be selected on any basis other than individual competence and training are typically rejected. Commanders often assert that they can "make do" with any assortment of "reasonably good" subordinates.

The task of research in this area is to specify the conditions under which team composition or organization makes a difference, and then to identify the individual traits and rules of combination which maximize performance under these conditions. A multidimensional approach which permits simultaneous variation of a large number of variables is indicated. A variety of realistic but dimensionalized tasks and large numbers of human subjects are required for successful research.

Little is now known of the relationship between individual and team training and performance criteria. In addition to skill training at the team level, teams designed for operations under conditions of isolation, dispersal, or rapid reaction, may require help in developing skill in diagnosis and correction of trouble within their own unit, or in reorganizing informally to take advantage of special skills as conditions change. Studies are also needed, particularly in relation to man-machine systems, of the optimal length and phasing of individual and team training, and the factors affecting transfer of team training from training tasks to operational tasks. In every case the interactive effects of team task characteristics and training variables are expected to be critical and the same may be true for team composition and organization variables.

Proposal—a Team Performance Laboratory. In order to make major significant advances to a technology of team performance in the next 10 years, basic research is required. There should be a coordinated program, integrating field observations of teams in naturalistic settings with laboratory tests. The concepts derived from field observations should be tested under rigorously controlled conditions, the control extending to extremes of variables not tolerable in the real world.

There is increasing evidence, from the success with which new concepts have been derived from developmental studies, that the notion of labora-

tory purity may not be entirely correct for teams. It may also be necessary, if prediction of team performance in real situations is the ultimate goal, to conduct basic research under the usual conditions of "noise" in the system and usual variability of incentives for effective team work.

It is probable that research workers should pay more attention to institutional wisdom about teams; the successful features of team management that have survived in many years of military operations should be studied, confirmed, qualified as suggested by the change from undifferentiated to differentiated team membership, and placed in a systematic context. For systematic, multivariable studies of the type required, an adequate laboratory facility and staff are needed. Scientists concerned with team performance should move frequently from the field to the laboratory and vice versa. A Team Performance Laboratory, designed for the purpose just stated, is proposed.

Of the scientific staff, about one-half should come from the fields of social and experimental psychology, including evaluation and measurement. The remaining half should be engineers, sociologists, mathematical statisticians, and operations research specialists. Provisions should be made for a few positions for key scientists on sabbatical leave and a number of technical support positions should be filled by graduate students in order to improve the flow of scientists into this multidisciplinary field. The laboratory should provide for the observation and measurement of the performance of teams of men. A computer of "intermediate size" is required for data reduction and control of input and feedback to the team members.

The three laboratory proposals, described above, would provide for three separate approaches to the problems of human performance of military tasks.

THE ADAPTATION OF COMPLEX ORGANIZATIONS TO CHANGING DEMANDS^{*}

The second major program concerns complex organizations. The essential problem here, from

^{*} This section is based on Selznick, P. (Ch.), Janowitz, M., Kornhauser, W., & March, J. G. *Report of the Task Group on Adaptation of Complex Organizations to Changing Demands*. Washington, D. C.: Smithsonian Institution, December 1, 1959 (For Official Use Only).

the point of view of the Department of Defense, is the adaptation of its many complex organizations to changing demands. The Department faces today, and will indefinitely continue to face, an organizational crisis. Defense organizations from the lowest units right up to our three Armed Services are necessarily in a continual state of flux.

The basic defense organization was devised in the days of man-to-man combat. Its key concept is that of many identical or highly similar units at the bottom, pyramiding slowly to a peak at the top. This basic defense organization is already adapting to changing demands.

The "staff revolution" is one sign of adaptation. By staff revolution is meant the explosive growth in size and importance of the military staffs relative to the line, a growth forced first by the industrial revolution and accelerated by the recent scientific revolution. A second sign of adaptation is the prevalence and dependence on informal briefings which bypass normal command and staff channels. Additional signs appear in the specialization of units and in those complicated institutions, the coordinating committees which appear and disappear not only between the three Armed Services but within each one of them, as well.

The Department will continue to adapt. Research should assist this adaptation.

The Man-Machine Systems Laboratory and the Team Performance Laboratory proposed above provide for extensive laboratory research in which one type of variable will be the effects of organization on human performance. Direct study of organizations under natural conditions is also needed.

Research on organizations to date has been dominated by three kinds of thinking (March & Simon, 1958, p. 6). Until a few years ago, the workers, the employees of organizations, have been conceived as machines, automata, whose own desires and motives are of little importance. A few years back the human relations view came to the fore, emphasizing the importance of each individual and of securing his active participation in pursuit of the goals of his organization. Currently, game and information theorists dominate the scene, leading to emphasis on decision making and the communication of information, and to a

problem solving view of the role of individuals in organizations.

These conflicting and incomplete theories of organization persist. The theoretical conflicts will continue to persist, the theories will remain inadequate, for at least as long as students of organization are forced to base their work on an unconnected series of case studies of organization. Most of the empirical studies in this field have been of single organizations. Such studies are valuable but they encourage subjectivism and incompleteness in theory and interpretation.

In addition to its related research on systems and teams, the Department of Defense should support comparative studies of organizations, of military organizations primarily but not necessarily of military organizations alone. Objective, empirical comparisons of military and industrial organizations would be very valuable, as would be comparisons of our military units with comparable units of our allies and other nations. The units chosen for study should not be picked, however, because they happen to be available, or because their leaders happen to desire a study. The units should be chosen deliberately to test hypotheses about the effectiveness of various types of organizations.

The topics of research that should be subjected to programed, systematic, comparative studies may be grouped under the headings: organizational goals and management strategies, incentive systems, and coordination and control. These topics are chosen for their general significance to organization theory and because they have specific relevance to the Defense agencies.

Proposal—an Institute of Organization Research. The establishment and support of a research institute dedicated to the fundamental theoretical and comparative study of complex military organizations is recommended.

This institute should have full access to military agencies for research purposes. It should be located on or near a university campus so as to maintain close contact with social scientists in related studies; an important, if subsidiary, function of such an institute would be to stimulate interest in Defense organization among social scientists generally. Since not many scientists are available in this field, a relatively small professional staff is recommended at this time.

PERSUASION AND MOTIVATION⁹

The topics of persuasion and motivation refer to methods of influencing people by means which are short of force, or authoritative command, or other direct incentives, on the one hand, and short of formal education or training, on the other hand.

Persuasion is exercised for the purpose of motivation; it shapes expectations, molds opinions and attitudes. Direct persuasion involves the use of announcements, communications, arguments (rational or otherwise), and indoctrination. Persuasion occurs indirectly in the context of weapons use (actual or implied), of monetary or other direct incentives, and of education and training. Thus many of the problems that need to be clarified related to optimum combinations of persuasion with more direct means of influencing people.

Persuasion characterizes the normal, everyday means of social intercourse, engaged in by everyone. The military services constantly use persuasion to motivate and influence their own people and those people outside the services with whom they interact. The military services are regularly used in indirect ways by the government to influence foreign peoples and foreign states. Even when more direct methods of controlling people are employed, when force or the direct threat of force is used, when special monetary or status incentives are employed, or when knowledge is imparted through military education or training in order to control future behavior, there are indirect effects, not always anticipated, in the attitudes and opinions of those controlled.

Persuasion is itself a weapon, then, that contributes, positively or negatively, to the effectiveness of more violent weapons, and that, as physical weapons become excessively violent, is tending to control their use in settling conflicts between societies. It is partly because of the effects of weapons on attitudes and opinions that political and ethical criteria must somehow be taken into account, as suggested above, as criteria of the effectiveness of weapon systems. The use of such

criteria in evaluating weapon systems and in decision making about war implies that we know a great deal more about persuasion than we actually know. Our familiarity with persuasion, resulting from our everyday use of it, is no guarantee that we know all that we need to know about it.

The military establishment has a major impact on world and United States national opinion simply by the ways in which it handles and displays its considerable powers and possessions. The forces dispersed through the nation and the world are in the public eye.

In any future war of significant length, there will be "special warfare," guerrilla operations, and infiltration. Subversion of our troops and populations will be attempted and prisoners of war will be subjected to "brainwashing." The military establishment must be prepared to assist in promoting recuperation and cohesiveness within possibly disorganized civilian populations, while attempting to shift loyalties within enemy populations.

Within its own ranks, the military establishment must maintain a willingness to man and hold dangerous and isolated posts, deployed over the face of the earth and even in space, and to work with unusual and dangerous devices. It must promote the desire of capable men to make a career in the military profession.

The military establishment needs to know all that can be known about persuasion.

Current research on persuasion of relevance to the military establishment and ready for programmatic support falls into four categories: the processes of persuasion; group relations and persuasion; the relation of cultural differences to persuasion; persuasion and social change.

Processes of Persuasion

Research on the processes of persuasion, on the nature, development, and stability of attitudes, and on the relation between attitudes and behavior, is fundamental to all progress in this field. The concept of attitude is still poorly defined even though there already exists a useful technology of attitude assessment. The relationships demonstrated to date between attitudes and motivational, cognitive, and personality variables are provocative of further research but they are by no means

⁹ This section is based on Schramm, W. L. (Ch.), Davison, W. P., Heyns, R. W., Riecken, H. W., McConnell, J. V., & Riley, J. W. Jr., *Report of the Task Group on Basic Research in Persuasion and Motivation*. Washington, D. C.; Smithsonian Institution, February 18, 1960 (For Official Use Only).

clearly understood. The combination and interaction of attitudes, their "structure," needs to be investigated.

Attitude changes and behavior changes sometimes accompany one another, sometimes not; behavior changes may precede and lead to attitude changes. Basic research is required to unravel the complexity of attitudes and their relation to behavior.

A human being's receptivity to influence varies in accordance with his internal states. Receptivity to influence, it is being demonstrated, may be affected by special procedures of sensory deprivation, physiological stress, hypnosis, and (in animals) by the use of electric shock applied directly to the brain through electrodes implanted within it. Investigation of these effects is a promising way to improve our understanding of the processes of persuasion.

Group Relations and Persuasion

The acceptance, rejection, or distortion of communication depends, in part, upon the identification of the recipient of the message with various groups, the group values, and their relation to the message. In these relations, individuals who are subject to cross pressures from their memberships in several groups, and individuals who recently have been alienated from a group (e.g., a refugee, or a prisoner of war who is not well integrated with his fellows), are more susceptible to propaganda than others.

Messages are passed on from person to person, but beyond the first few links we know almost nothing of the process. The general questions are of who knows whom in a given kind of society, how influence and authority are exerted within it, how information spreads and is reflected in attitude changes as it passes from person to person. The mass communication audience is a social structure, not an aggregation of individuals. Individuals seem to vote, buy, think, and act with other individuals who are significant to them and whose beliefs are salient to the issue at hand. In research on voting behavior, it is recognized that new methods are needed to fit together data about individuals so as to represent groups and group structures. We need to be able to simulate social groups for research on networks of communication.

One of the major findings of attitude research in World War II was that the American soldier was motivated less by ideology and training than by his desire not to "let his buddy down." A combination is suggested of field studies using attitude survey techniques with laboratory studies of two-person interactions in response to persuasion in simulated situations.

There has been little systematic research on the characteristics of the communicator, on the pressures which impinge upon him, on his sources, on his use of "feedback" information from those to whom he communicates, on his role, in other words, as an integral part of a communication system. The Department of Defense should be interested in studies of opinion leaders—internal, allied, neutral, and enemy—in prisoner of war camps, guerrilla bands, and barracks cliques, as well as in military and political leaders.

Cultural Differences and Persuasion

As knowledge accumulates of the processes of persuasion in our own culture, it becomes important to test conclusions against other cultures. The experiments which appear to be critical for a theory of persuasion should be repeated in other cultural environments.

Another way to approach the interaction of values and persuasion is to study in greater detail the methods of persuasion and indoctrination used by the Chinese and other Asian people in comparison with our own attempts to build favorable attitudes in these countries. Still another is to study the effects of our own military postures in different countries. From such testing of theories of persuasive processes can emerge a systematic classification of the value systems, stereotypes, and national images of the chief cultures with which the military establishment is likely to have extensive contact.

Swift and spectacular changes seem to occur in national images, as, for example, the changes in our own attitudes toward the German and Japanese peoples between World War II and the post-war period. Similar changes appear to occur in the underdeveloped countries and, more generally, in all countries. On several occasions our representatives have seemed to be caught unawares by revolutions, when, with no warning, rioting mobs have boiled up around our bases, reflecting a state

of public opinion and anger which previously seemed not to exist. Numerous completed studies of current history, as it occurs or immediately after, have been very fruitful in revealing the course of persuasion in communities—studies, for example, of the development and dissolution of a small group that expected the end of the world, of the course of integration in a public school system, of the panic following an “invasion from Mars” or the Texas City disaster, and of the crisis during the Berlin airlift.

In the same way, the analysis of events in the more remote past is helpful, as in interviews conducted by the postwar Strategic Bombing Survey, or in a review of the psychological effects of atomic and other explosives through systematic study of news accounts, medical observations, military and other reports.

The need is for systematic and deliberate selection of the events to be studied in terms of their relevance to one or more aspects of persuasion and for treatment of the events in the terms of social science rather than as simple historical records.

Proposal—Small centers of research on persuasion and motivation. In each of the four main problem areas outlined above, scattered research projects are in progress. In many cases, the projects are motivated by direct, applied needs and are related too indirectly to long-term military needs to be helpful with respect to the theory of persuasion needed to make effective the general military use of persuasion.

The primary need is to create a small number of stable, permanent centers of research on persuasion as related to politico-military needs. A number of groups in the United States are now conducting significant research, but interest in the military aspects is dying out as the sense of need and urgency created in World War II and the Korean War lessens. The difficulty is exaggerated when support is concentrated on short-term, highly specific, applied projects.

Military support should seek to integrate basic and applied research in the pursuit of a technology of persuasion. It should build a few existing centers of research on persuasion into stable, continuing organizations with an interest in military problems. It should provide them with the ability to program ahead, yet permit flexibility to take advantage of extraordinary circumstances as they occur. At relatively little added cost, the Depart-

ment of Defense could create a half dozen, stable centers of basic and applied research on persuasion and motivation as related to military operations.

A number of centers are needed in this field, rather than a centralized institution, in order to encourage a variety of approaches to the critical and difficult problem areas of persuasion and motivation. Overlapping studies by different groups should be encouraged, provided only that familiarity is maintained with one another's work.

Funds should be provided in the form of research grants in order to insure flexibility in research and rapid mobilization to take advantage of current events as they occur. At each of six institutions, say, a few scientists should be liberally supported by the military establishment on a stable, continuing basis to conduct research in the areas described above. Considerable support of travel and adequate data reduction facilities will be needed in each center.

METHODS OF SUPPORTING BEHAVIORAL SCIENCE RESEARCH

The third major topic of this discussion is the relation of present support of research in the recommended fields to the support needed to advance them most rapidly.

The military departments now support R and D in many areas of behavioral science, including those recommended here. Support is given either through the in-service laboratories and the laboratories of the industrial contractors, or through the basic research contracts and grants of the Office of Naval Research, the Air Force Office of Scientific Research, and the Army Technical Services.

The in-service and industrial laboratories are doing an excellent job, within the limits of their primary missions and responsibilities. Their primary job, of course, is the development of specific weapon and supporting equipment, and the primary job of the human factors people within these laboratories is to solve the special human factors problems related to such equipment.

The human factors laboratories are deeply involved in solving many highly special problems: problems of acceleration and deceleration, isolation, and weightlessness; problems of detecting and tracking targets displayed on specific kinds of dials or oscilloscopes; problems of communication under particular conditions; manpower and personnel

problems; and so on. The laboratories also have facilities and funds for more general studies and with these they are making significant contributions to a more general technology of human behavior, and to theoretical development in these fields. These more general facilities and funds are small, however, in relation to the depth of the need and the requirement for systematic study in the three fields of present concern.

The military departments also operate research project contract and grant programs. The Office of Naval Research, the Air Force Office of Scientific Research, and the Army Technical Services ably provide support across the whole broad field of psychology and the social sciences. These agencies have fertilized many areas. It is such fertilization, by these and other government agencies such as the National Science Foundation, and by the private foundations, that has made it possible to say that the fields emphasized here are ready for intensive technological development.

The current method of support by these agencies is to back men and limited, well-designed projects. To many separate men with ideas, these agencies provide relatively small sums, on an annual or at least on a relatively short-time basis. This is a time-tested and proven method of producing advance in the uncertain world of research. The objective of this method is to produce creativity. Behavioral scientists, generally, accept this method of support and hope that it will be continued and extended. Nevertheless, such long-term programming of the many restricted projects as occurs is in the minds of those who administer and budget the funds and does not represent a commitment or attitude of those to whom the funds are given.

The Additional Kind of Support Needed

The systematic studies and facilities needed to develop a technology of human behavior will be time consuming and expensive. For multivariate research, simulation, use of computers in real time, public opinion studies, the characteristics and attitudes of foreign peoples, etc., major facilities and large-scale support should be added. The need is to provide a relatively few capable scientists¹⁰

¹⁰ A total of 65-70 psychologists and of 30-35 other social scientists was planned.

with superb facilities, adequate interdisciplinary and technician help, and continuity of support. The need is to instill in the key scientists involved a desire to improve national defense through systematic technological development of their subjects and to support them in a manner adequate to their task.

For long-range, systematic research, "longevity funding" is appropriate. Under longevity funding, a contract or grant is let for a period of years and additional funds are added in the second and each following year to extend the life of the original contract by an additional year. Thus, continuity is provided, flexibility in adapting to changing circumstances is possible, and the complexities of variation in budget and of frequent rejustification are minimized.

In the present structure of research support, and because of its deep technological needs, the Department of Defense is the logical source of this new type of support for the systematic, long-range study of human behavior. The Department should establish major laboratories for a systems approach, an individual approach, and a team approach to the problems of human performance; a small institute for the comparative study of military organizations; and a number of small centers of research on persuasion and motivation.

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PRESENT STATUS OF PSYCHOLOGICAL RESEARCH AND TRAINING IN HYPNOSIS:

A DEVELOPING PROFESSIONAL PROBLEM¹

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THE history of hypnosis in the past one hundred years has been characterized by a curious cycle of interest and enthusiasm, followed by reactions of skepticism and intense negativism. Both World Wars occasioned a reawakened interest in the therapeutic potentialities of hypnosis, and the present high level of interest has been sustained for over a decade now. One reason is that responsible professional persons have sought to safeguard against the exaggeration and overdramatization which contributed to the rejection of hypnosis in the past. A recent dividend has been an increasing official recognition of advancements in this area by the major professional organizations in medicine and psychology.

METHOD

An anonymous questionnaire on the subject of training and research in hypnosis was sent to the chairman of the 55 psychology departments with APA approved training programs in clinical psychology, and to the deans of 85 American Medical Association approved medical schools. In instances where active teaching and training were conducted, it was requested that the faculty member involved answer the questionnaire. The questionnaire consisted of items pertaining to the past, present, and future teaching of hypnosis, faculty and student research during the past 10 years, departmental and administrative policies, the availability of trained persons to teach such courses, relevant practicum and internship experience, course prerequisites and emphasis, and a half dozen general theoretical questions.

RESULTS

Completed questionnaires were received from 54 psychology departments and from 39 medical

¹ Acknowledgment is also due Toni Barricklow and Jack Hewitt for their contributions to this manuscript.

schools.² Table 1 depicts responses to seven questions pertaining to formal course instruction. As may be seen, only eight psychology departments and two medical schools have courses in hypnosis, though several include reference to hypnosis in other courses. Three of the courses have been taught for 20 years or longer and one course in each discipline was inaugurated this past year. One school of each discipline expressed doubt regarding continuation of an existing course. Brief course descriptions evidenced a seeming difference in emphasis: In medical schools the focus was largely on direct clinical application (e.g., "Hypnosis as an adjunct to psychotherapy"), while in the departments of psychology there was emphasis on the theoretical and research, as well as the applied aspects. There was no agreement as to the most suitable texts for such a course.

Table 2 represents the level of research activity of medical schools and psychology departments, both faculty and student, in which hypnosis was used as an investigatory technique or was itself the focus of investigation. It will be noted that a few of the categories are slightly ambiguous, reflective of the actual responses to the questionnaire. These results are assumed to be fairly factual, however, since respondents were asked to provide either the formal title of such projects or a brief description. A total of 79 projects was thus reported as conducted in departments of psychology, and 14 in medical schools (it seems reasonable to double this figure to arrive at a "best estimate" for all medical schools).

The content of the reported studies varied

² This number of responses was received before the questionnaire was disapproved by the Association of American Medical Colleges. Future investigators should be aware that questionnaires and surveys involving institutional members must first be approved by the AAMC, Evanston, Illinois.

TABLE 1
RESPONSES FROM MEDICAL SCHOOLS AND PSYCHOLOGY DEPARTMENTS RELATIVE TO FORMAL
TRAINING IN HYPNOSIS

Questions	Medical			Psychology		
	Yes	No	No Answer	Yes	No	No Answer
1. Is hypnosis taught as a separate course?	2	37	0	8	46	0
2. If no formal course, is it taught as a major part of some other course? ^a	3	32	2	1	45	0
3. Was hypnosis taught as a course in the past? ^b	5	31	3	9	41	4
4. Are there any formal (or "unspoken") policies regarding the teaching of hypnosis or its use in research in the department?	8	26	5	14	39	1
On higher administrative levels?				9	43	2
5. Is there a qualified person readily available to teach such a course?	26	8	5	24	25	5
6. Would you favor offering such instruction?	12	18	9	15	32	7
7. To your knowledge is this technique taught trainees or residents in any of your practicum (internship) facilities?	17	18	4	8	44	2

^a Four psychology departments and nine medical schools indicated that hypnosis is taught as a minor part of another course.

^b Figures include courses now being taught; apparently only one psychology department has discontinued such a course at some time in the past.

considerably. As might be anticipated, research efforts in medical schools were largely of a clinical nature, such as "treatment of hypnotically induced conflicts and symptoms." A partial, representative list reflects the somewhat broader scope of research in psychology graduate departments: "Use of hypnosis in a study of Wolpe's systematic desensitization," "relation of autonomic conditionability and hypnotizability," "study of hypnotic age regression through cognitive changes," "semantic analysis of dream symbolism in psychotherapy," "time distortion under hypnosis," "experiment on the psychoanalytic mechanism of isolation," and "cognition and emotion in relation to a conceptual model of mind."

Respondents were asked to indicate either why they did or did not favor formal instruction in hypnosis. Typical favorable statements from medical respondents were: "It is an essential part of education into certain aspects of human behavior," and "a legitimate medical and research technique"; psychology respondents replied that hypnosis is: "A good tool for experimentation" and a "part of the armamentarium of the psychologist." Unfavorable attitudes were evidenced with much greater frequency, of course. Medical respondents reported that: "The curriculum is already overcrowded," and that hypnosis is "less important than other type content," or "too easy to abuse." Psychology respondents typically remarked that

TABLE 2
COMPARATIVE SUMMARY OF RESEARCH PROJECTS IN PSYCHOLOGY DEPARTMENTS AND MEDICAL SCHOOLS

	Number of Research Projects Reported											
	0	1	1-2	2	3	3-4	4	6	10	15	"Many"	No Answer
Psychology Departments												
Faculty	30	6	1	5	1	1		1	1	1	1	2
MA theses	40	5		1								3
PhD dissertations ^a	37	10		2	1							
Total Psychology	21	1	8	2	1	0	1	1	1	1	1	5
Medical Schools (Faculty only)	25	4	0	0	2	0	1	0	0	0	0	7

^a The difficulty of obtaining an accurate picture of research activities is reflected in the fact that for this same period, *Dissertation Abstracts* listed only five of these dissertations.

there is: "Not sufficient subject matter for a course," "The content is too specialized," "I don't see what a student could learn from it," and "It should be taught in a medical setting."

Among the general questions asked were two of immediate relevance to this paper, namely, "Who is qualified to use hypnosis in treatment?" and "What are the major dangers involved, if any, in its use?" Respondents from medical schools generally indicated that the use of hypnosis in treatment should be restricted to physicians with training in psychodynamics and hypnosis (e.g., "Only licensed and qualified physicians or persons working directly under their supervision. The teaching of hypnosis is the responsibility of the psychiatry departments"). Psychology respondents also favored legal restrictions on the use of hypnosis, but included themselves in the qualified category (e.g., "Psychiatrists, general practitioners with some psychiatric orientation, dentists who restrict practice to their area of competence, and psychologists—with medical consultation where needed").

The question concerning the assumed dangers of hypnosis elicited a wide range of responses; for instance: precipitation of psychotic reactions, feelings of omnipotence in the hypnotist and associated abuses, authoritative approach involving direct symptom removal, overdependence on the therapist, risk with latent homosexuals, and indirect dangers due to superstitious fears of patients and public, including "embarrassing coincidences." A third of the respondents acknowledged no unique hazards associated with the therapeutic employment of hypnosis, e.g., "same as in any form of psychotherapy."

DISCUSSION

Of 39 medical schools reporting, only two offer a formal course in hypnosis, three utilize this subject as a major part of any course, and nine include it as a minor part of some course. This is true despite the fact that 26 schools (66%) report having qualified instructors available. Seventeen schools (43%) did indicate that their students are taught this technique in practicum facilities. Statistics gathered from 54 psychology departments are even less impressive. Eight teach a separate course, and one other department offers it as a major part of a course. This is true although 24 (44%) have

qualified instructors. In other words, only 17% of psychology departments afford students any formal exposure to hypnosis—and only six (12%) offer some practicum instruction in addition to or in lieu of course work.

If the reported incidence of qualified instructors can be taken at face value—and it cannot be assumed that even well-qualified psychologists or psychiatrists possess the requisite skills—then reluctance to teach this subject is apparently not attributable to this source. Again, it is doubtful if the alleged dangers of hypnosis account for the sparsity of training opportunities. Only eight of the medical schools operate under any formal or unspoken policy limitations; similarly, 14 psychology departments have formulated departmental policies and only nine must contend with higher administrative policies. However, most of these policies are intended to be helpful in a precautionary sense rather than prohibitive; for example: "Use with caution and only with approval of faculty members," "Limited to subjects over 21 years (if under age, agreement must be signed by guardian)," "All sessions must be tape-recorded (another stipulated that sessions must be held in the presence of a nonparticipant witness)," "Sensitivity to possible public relations problems concomitant with use," "Induction alone is not to be taught," and so forth.

The reason for this failure to include training in hypnosis in the curriculum would seem to reside more in the basic attitudes of faculty themselves. It is difficult for even the well intentioned to remain neutral or objective about hypnosis. The favorably inclined too frequently display an uncritical acceptance of the magical nature of the procedure, while the majority either ignore the subject or try to debunk and explain away the phenomenon. Sincere investigators are often forced into a defensive posture, feeling it necessary to justify their interest because of the "career risk" involved. A recurrent core attitude stated on the questionnaire seems best expressed as: "We oppose the practice of hypnotechniques by the untrained, but at the same time we do not favor offering the necessary instruction because (a) not enough is known scientifically about the phenomenon, (b) the area is too specialized, or (c) because it is of very limited interest or value." This omission is consistent with the policy of many graduate psychology departments that advanced, specialized

technique courses, including even individual and group psychotherapy, are best taught at the post-doctoral level. Whatever the reason, it is evident that there is no ground swell of interest in hypnosis in academic centers, and it seems predictable that few psychology departments will institute such courses in the foreseeable future.

This general attitude of indifference contrasts markedly with the interest always manifested by the curious layman, and with an active, though modest proportion of the medical, dental, and psychological professions. For instance, it can be estimated that in the past 10 years, over 25,000 physicians, dentists, and psychologists paid \$125

to \$350 per person for the privilege of attending two- to three-day seminars on the clinical applications of hypnosis.³ An even more striking contrast is provided by the nature and level of professional research activity in this area.

In the past decade, the faculty of 18 (33%) psychology departments have participated in research with hypnosis, while nine departments (17%) have had MA theses and 13 (24%) have had PhD dissertations. Medical school research in

³ A conservative estimate based on personal communications from L. M. LeCron (Hypnosis Symposiums) and M. H. Erickson (Hypnosis Seminars), as well as estimates of the attendance at Seminars by D. Elman and H. Aron.

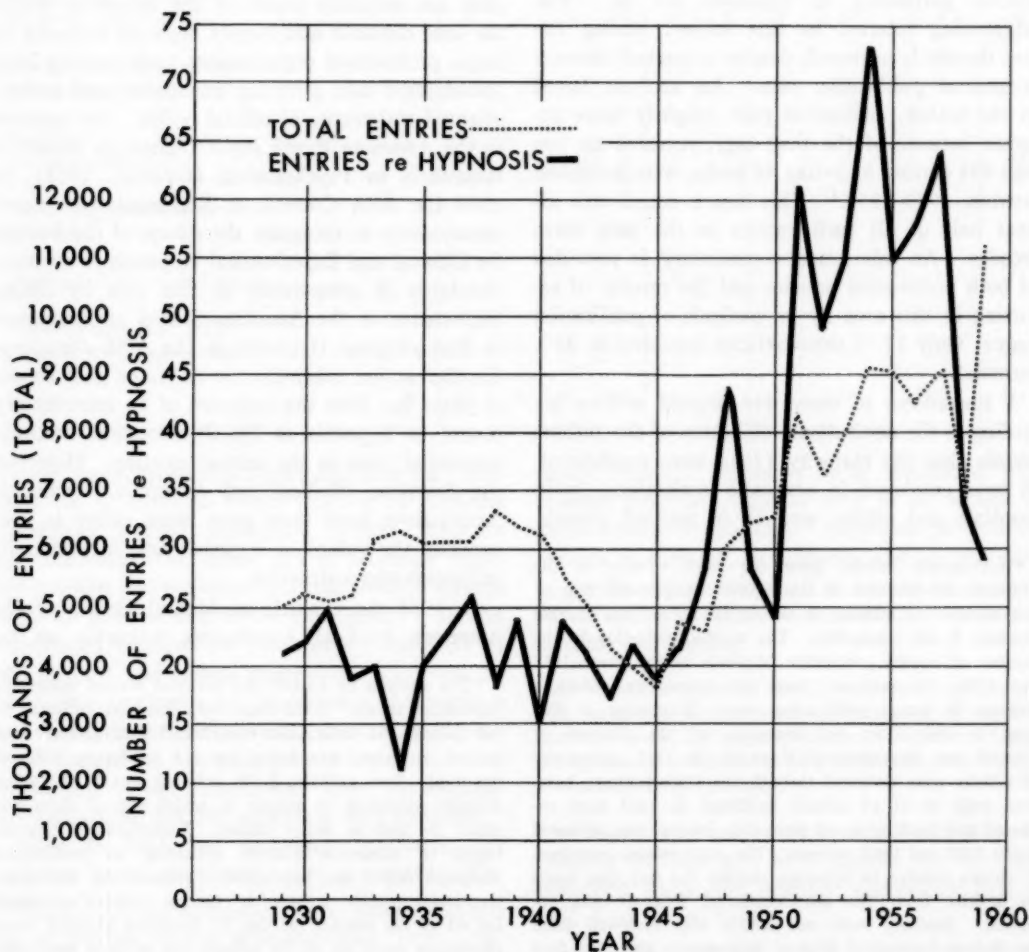


FIG. 1. Total number of entries as compared with those specific to hypnosis in the *Psychological Abstracts*, 1929-1959, inclusive.

hypnosis during this same period was practically nonexistent; only seven (17%) of the schools reporting had a total of 14 projects. In the latter instance, of course, student research is not encouraged; at the same time, it was not determinable from the questionnaire what percentage, if any, of investigators in medical settings might have been psychologists.

An interesting comparison with these figures is provided by an appraisal of the *Psychological Abstracts*, which reveals that in the past 31 years (1929-1959 inclusive), 971 entries pertained specifically to this topic. Figure 1 represents the total number of entries in the *Abstracts* (in thousands) in this period, as contrasted with summaries of articles pertaining to hypnosis per se. The heightening interest in this subject during the past decade is mirrored, despite a marked increase in general publication rate. An analysis based on the actual publication year (slightly more accurate because of the time lag), revealed no less than 494 entries, including 48 books, were published between 1950-1959.⁴ This figure constitutes almost half of all such entries in the past three decades. An interesting commentary is provided on both publication policies and the quality of reporting in this area by an analysis of publication source: Only 17 of these articles appeared in APA journals!

A breakdown of these 446 journal articles according to the institutional affiliation of the authors reveals that the majority (291) were unaffiliated, 98 were employed in academic institutions, 34 in hospitals and clinics, and 14 in medical schools.

⁴ Appropriate entries from the 1960 volume of the *Abstracts* are included in this figure. Despite the impressive number of articles, it should be noted that journal coverage is not exhaustive. The marked reduction in the number of entries concerning hypnosis in the years 1958 and 1959, for instance, does not necessarily reflect a decrease in actual publication rate. Illustrative of this point is that from the inception of the *Journal of Clinical and Experimental Hypnosis* in 1953, practically all articles were reviewed through the 1956 volume; however, only 10 of 19 articles published in 1957 were reviewed and nothing at all from this journal was reviewed in the 1958 and 1959 volumes. The 1960 volume contained 57 entries relative to hypnosis, despite the fact that again no articles from the aforementioned journal were reviewed. Similarly only one article was reviewed from the *British Journal of Medical Hypnosis* in the 1954-1959 *Abstracts*. Thus there are difficulties in obtaining any comprehensive picture of hypnosis research.

These figures provide a cross check on the relative research productivity of universities and medical schools; as may be seen, the former shows to slightly greater advantage and the latter less so, in comparison with the results of the questionnaire survey.⁵

A content analysis of the 494 entries is represented in Table 3. The categorization is admittedly rather arbitrary since a single article could often be listed under two or more headings, though the seemingly major emphasis was used in the assignment. Nevertheless, the table is a helpful reflection of interest areas.

All of the foregoing statistics have a very immediate and practical significance. Few psychologists are probably aware of the degree to which the long dormant and largely negative attitudes of major professional organizations have recently been transformed into generally affirmative and action-oriented statements of official policy. As reported in the *American Psychologist* (American Board of Examiners in Psychological Hypnosis, 1961), in 1960 the APA Council of Representatives voted unanimously to recognize the efforts of the Society for Clinical and Experimental Hypnosis to evaluate standards of competency in this area by listing Diplomates of the American Board of Examiners in Psychological Hypnosis in the *APA Directory*. Another action taken by the APA the past couple of years has been the inclusion of an introductory course in hypnosis in the Postdoctoral Institute conducted prior to the annual meeting. However, the American Medical and American Psychiatric Associations have been even more active in recognizing the values of hypnosis and in urging its utilization and instruction.

In 1958 the Council on Mental Health of the American Medical Association, following an in-

⁵ The analysis by author also revealed several interesting publication trends. While these 494 items were authored by 307 persons, 32 individuals contributed four articles (and books) or more, accounting for 268 entries or 54% of the total. Two authors, J. M. Schneck and M. V. Kline, actually published 78 articles in which one of them was either the sole or senior author. Unfortunately, the attempt to categorize authors according to professional discipline defied our best efforts; however, of the aforementioned prolific writers, 10 foreign authors accounted for 60 of the entries; of the 22 American authors, seven physicians wrote 88 of the articles (48 of these were contributed by Schneck); 14 psychologists published 116; and a dentist accounted for the remaining 4.

TABLE 3
CONTENT ANALYSIS OF HYPNOSIS ENTRIES: 1950-1959

Content	Year of Actual Publication: American Journal Articles										Foreign	Books	Totals
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959			
Diagnostic (e.g., Rorschach content in hypnosis)	3	2	3	1	2	2	3	1			3	1	21
Educational (e.g., a hypnosis reading list for professional instruction)	2	2	1	2		1		2		2	3	10	25
Experimental (e.g., mental ages changes in age regression)	12	10	10	11	12	10	8	7	10	6	16	2	115
Medical (e.g., hypnotherapy in obstetrics and gynecology)		5		4	3	5	6	3	3	3	10	5	48
Physiological (e.g., vasomotor activity in hypnosis)	2	2	1	2	3	4	4	2		6	10		36
Theoretical (e.g., hypnosis as role-taking behavior)	5	9	4	11	6	9	9	7	5	5	10	5	85
Dental (e.g., psychosomatics in dentistry)		1			6	6	3					2	18
Legal (e.g., hypnosis and crime)						1		1			1	1	4
Psychotherapy (e.g., Techniques of brief hypnotherapy)	3	11	11	18	19	11	13	6	4	3	20	22	142
Totals	27	42	30	49	51	49	46	29	22	25	73	48	494

tensive study, released a report affirming the legitimate use of hypnosis in the practice of medicine (American Medical Association, 1958).⁶ This report recognized the severe lack of necessary training facilities and recommended that medical schools begin to provide instruction in hypnosis. It also encouraged research in this area by members of the medical and dental professions. In view of conflicting testimony by consultants, no position was taken on the controversial question of the alleged dangers of hypnosis. It is of interest that subsequent policy statements have increasingly emphasized the hazards associated with hypnosis.

Early in 1961, the American Psychiatric Association issued an official policy statement. The

report begins: "Hypnosis is a specialized psychiatric procedure and as such is an aspect of doctor-patient relationship. Hypnosis provides an adjunct to research, to diagnosis and to treatment in psychiatric practice." The statement contains the following specific recommendations regarding teaching and training.

All courses in hypnosis should be given in conjunction with recognized medical teaching institutions or teaching hospitals, under the auspices of the department of psychiatry and in collaboration with those other departments who are similarly interested.

The report goes on to recommend expansion of teaching facilities and to emphasize the need for continued study and research (American Psychiatric Association, 1961).

Later that year the AMA Council on Mental Health, Committee on Hypnosis, issued a detailed statement on Training in Medical Hypnosis

⁶ Readers may also be interested in the report on medical use of hypnosis (*British Medical Journal*, 1959). Implications of the Act of Parliament of April 1, 1952, for hypnotherapists in the United Kingdom are ably discussed by G. Newbold (1953).

(1960a).⁷ The report is described as "an attempt to formulate policies concerning training in hypnosis, not only to meet the needs of physicians who wish to acquire competence in its (hypnosis) use, but for the protection of both the medical profession and the public." The report stresses the dangers inherent in applications of hypnosis by the psychiatrically untrained and states that "The responsibility to formulate criteria for proper training in hypnosis must be met."

The report describes a model course in detail and concludes with the following statement:

The medical profession faces a challenge in connection with hypnosis. The growing relative shortage of physicians is being exploited as the basis for elevating the status of many non-medical healers. In many places physicians are relinquishing important prerogatives without realizing it. Nowhere is this more patent than in relationship to hypnosis. Many dentists, psychologists, and other individuals with some scientific training are functioning as "hypnotists to the medical profession." . . . Corrective action is required.

An implication of these increasingly detailed formulations of official policy is that unless the psychological profession is more active in protecting its rights to research and clinical use of a methodology which is basically psychological, it may find itself legally excluded from the field.⁸ If the intention of the American Medical and Psychiatric Associations is to institute restrictive legis-

lation, these efforts may fare no more successfully than continuing attempts of these organizations to regulate the practice of psychotherapy; however, there is one basic difference—the apathy (and even antagonism) towards hypnosis of the majority of psychologists.

One additional index of this indifference is in terms of membership in the two national societies devoted to promotion of the scientific and professional aspects of hypnosis. Although both societies have labored to secure equal recognition of the right of properly qualified psychologists to use these methods, psychologists constitute only 15% of the membership of the Society of Clinical and Experimental Hypnosis, and less than 4% of the members in the American Society of Clinical Hypnosis. At the same time, some hope of avoiding a repetition of unfortunate past differences between the medical and psychological associations is provided by the accepting and supporting attitudes of the two hypnosis societies, the substantial majority of each being the physicians most skilled and interested in the use of this method. Similarly, on the local and even state levels there have been encouraging signs of cooperation between psychologists and psychiatrists in this area. It may be that the objectives of the AMA have been misinterpreted and that the ignoring of the significant contributions of psychologists was not intended.

In any case, if psychology does not choose to forfeit its prerogatives in this area, now may be the time for fruitful explorations between the two professions before extreme attitudes and defensive reactions crystallize. Certainly both the medical and psychological professions stand to gain by harmonious cooperation leading to effective legislation in restricting operations of the many charlatans in this field. This developing problem presents the psychologist and the physician with a new opportunity to resolve their professional differences in a mutual concern for both the welfare of their clients and the advancement of medico-social science.

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⁷ Report approved February 1960 by Council on Mental Health and reviewed April, 1960 by Council on Medical Education and Hospitals. Another article of related nature (Rosen & Bartemeier, 1961) re-emphasizes the hazards associated with hypnosis, and that "hypnosis is a potent medical technique and adequate training can be afforded only in medical schools and teaching departments within departments of psychiatry." There is also continued emphasis on research ("High level research projects, utilizing hypnotic techniques, with grants which in toto could come to well over a million dollars, have been proposed."). One other recent reference of possible interest is the statement on the Use of Hypnosis in Athletics (American Medical Association, 1960b). The authors are indebted to Harold Rosen, Chairman, Committee on Hypnosis, Council on Mental Health, for his cooperation in bringing these articles to their attention.

⁸ The Society for Clinical and Experimental Hypnosis has published a useful summary of existing legislation in all 50 states (1961). The Committee on Legislation of the American Society of Clinical Hypnosis has also recently compiled a 16-page report on the legislative regulation of hypnosis (undated).

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SOVIET METHODS OF CHARACTER EDUCATION:

SOME IMPLICATIONS FOR RESEARCH¹

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EVERY society faces the problem of the moral training of its youth. This is no less true of Communist society than of our own. Indeed, Communist authorities view as the primary objective of education not the learning of subject matter but the development of what they call "socialist morality." It is instructive for us in the West to examine the nature of this "socialist morality" and the manner in which it is inculcated, for to do so brings to light important differences in the ends and means of character education in the two cultures. For research workers in the field of personality development, such an examination is especially valuable, since it lays bare unrecognized assumptions and variations in approach. Accordingly, it is the purpose of this paper to provide a much-condensed account of Soviet methods of character education and to examine some of the provocative research questions that emerge from the contrast between the Soviet approach and our own.

THE WORK AND IDEAS OF A. S. MAKARENKO

To examine Soviet methods of character training is to become acquainted with the thinking and technology developed primarily by one man—Anton Semyonovich Makarenko. Makarenko's name is virtually a household word in the Soviet Union. His popularity and influence are roughly comparable to those of Dr. Spock in the United States, but his primary concern is not with the child's physical health but with his moral upbringing. Makarenko's influence extends far beyond his own voluminous writings since there is scarcely a manual for the guidance of Communist parents, teachers, or youth workers that does not draw heavily on his methods and ideas. His works have been translated into many languages and are apparently widely read not only in the Soviet Union

but throughout the Communist bloc countries, notably East Germany and Communist China. Excellent English translations of a number of his works have been published in Moscow (1949, 1953, 1959) but they are not readily available in this country.

Makarenko developed his ideas and methods over the course of a lifetime of practical work with young people. In the early 1920's, as a young school teacher and devout Communist, Makarenko was handed the assignment of setting up a rehabilitation program for some of the hundreds of homeless children who were roaming the Soviet Union after the civil wars. The first group of such children assigned to Makarenko's school, a ramshackle building far out of town, turned out to be a group of boys about 18 years of age with extensive court records of housebreaking, armed robbery, and manslaughter. For the first few months, Makarenko's school served simply as the headquarters for the band of highwaymen who were his legal wards. But gradually, through the development of his group-orientated discipline techniques, and through what can only be called the compelling power of his own moral convictions, Makarenko was able to develop a sense of group responsibility and commitment to the work program and code of conduct that he had laid out for the collective. In the end, the Gorky Commune became known throughout the Soviet Union for its high morale, discipline, and for the productivity of its fields, farms, and shops. Indeed, Makarenko's methods proved so successful that he was selected to head a new commune set up by the Ministry of Internal Affairs (then the Cheka, later to become the GPU and NKVD). In the years which followed, Makarenko's theories and techniques became widely adopted throughout the USSR and now constitute the central core of Soviet educational practice.

To turn to the ideas themselves, we may begin with an excerpt from what is possibly the most widely read of Makarenko's works, *A Book for Parents* (1959).

¹ Reprinted from: *Relig. Educ.*, 1962, 57(4, Res. Suppl.), S45-S61.

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But our [Soviet] family is not an accidental combination of members of society. The family is a natural collective body and, like everything natural, healthy, and normal, it can only blossom forth in socialist society, freed of those very curses from which both mankind as a whole and the individual are freeing themselves.

The family becomes the natural primary cell of society, the place where the delight of human life is realized, where the triumphant forces of man are refreshed, where children—the chief joy of life—live and grow.

Our parents are not without authority either, but this authority is only the reflection of societal authority. The duty of a father in our country towards his children is a particular form of his duty towards society. It is as if our society says to parents:

You have joined together in good will and love, rejoice in your children and expect to go on rejoicing in them. That is your personal affair and concerns your own personal happiness. Within the course of this happy process you have given birth to new human beings. A time will come when these beings will cease to be solely the instruments of your happiness, and will step forth as independent members of society. For society, it is by no means a matter of indifference what kind of people they will become. In delegating to you a certain measure of societal authority the Soviet State demands from you the correct upbringing of its future citizens. Particularly it relies on you to provide certain conditions arising naturally out of your union; namely, your parental love.

If you wish to give birth to a citizen while dispensing with parental love, then be so kind as to warn society that you intend to do such a rotten thing. Human beings who are brought up without parental love are often deformed human beings (Makarenko, 1959, p. 29).

Characteristic of Makarenko's thought is the view that the parent's authority over the child is delegated to him by the state and that duty to one's children is merely a particular instance of one's broader duty towards society. A little later in his book for parents, the author makes this point even more emphatically. After telling the story of a boy who ran away from home after some differences with his mother, he concludes by affirming: "I am a great admirer of optimism and I like very much young lads who have so much faith in Soviet State that they are carried away and will not trust even their own mothers" (Makarenko, 1959, p. 37-38). In other words, when the needs and values of the family conflict with those of society, there is no question about who gets priority. And society receives its concrete manifestation and embodiment in the *collective*, which is an organized group engaged in some socially useful enterprise.

This brings us to Makarenko's basic thesis that

optimal personality development can occur only through productive activity in a social collective. The first collective is the family, but this must be supplemented early in life by other collectives specially organized in schools, neighborhoods, and other community settings. The primary function of the collective is to develop socialist morality. This aim is accomplished through an explicit regimen of activity mediated by group criticism, self-criticism, and group-oriented punishments and rewards.

Makarenko's ideas are elaborated at length in his semibiographical, semifictional accounts of life in the collective (1949, 1953). It is in these works that he describes the principles and procedures to be employed for building the collective and using it as an instrument of character education. More relevant to our purposes, however, is the manner in which these methods are applied in school settings, for it is in this form that they have become most systematized and widely used.

SOCIALIZATION IN THE SCHOOL COLLECTIVE

The account which follows is taken from a manual (Novika, 1959) for the training and guidance of "school directors, supervisors, teachers, and Young Pioneer leaders." The manual was written by staff members of the Institute on the Theory and History of Pedagogy at the Academy of Pedagogical Sciences and is typical of several others prepared under the same auspices and widely distributed throughout the USSR.

This particular volume carries the instructive title: *Socialist Competition in the Schools*. The same theme is echoed in the titles of individual chapters: "Competition in the Classroom," "Competition between Classrooms," "Competition between Schools," and so on. It is not difficult to see how Russians arrive at the notion, with which they have made us so familiar, of competition between nations and between social systems. Moreover, in the chapter titles we see already reflected the influence of dialectical materialism: Conflict at one level is resolved through synthesis at the next higher level, always in the service of the Communist collective.

Let us examine the process of collective socialization as it is initiated in the very first grade. Conveniently enough, the manual starts us off on the first day of school with the teacher standing before

the newly assembled class. What should her first words be? Our text tells us:

It is not difficult to see that a direct approach to the class with the command "All sit straight" often doesn't bring the desired effect since a demand in this form does not reach the sensibilities of the pupils and does not activate them.

How does one "reach the sensibilities of the pupils" and "activate them"? According to the manual, here is what the teacher should say: "Let's see which row can sit the straightest." This approach, we are told, has certain important psychological advantages. In response,

The children not only try to do everything as well as possible themselves, but also take an evaluative attitude toward those who are undermining the achievement of the row. If similar measures arousing the spirit of competition in the children are systematically applied by experienced teachers in the primary classes, then gradually the children themselves begin to monitor the behavior of their comrades and remind those of them who forget about the rules set by the teacher, who forget what needs to be done and what should not be done. The teacher soon has helpers.

The manual then goes on to describe how records are kept for each row from day to day for different types of tasks so that the young children can develop a concept of group excellence over time and over a variety of activities, including personal cleanliness, condition of notebooks, conduct in passing from one room to the other, quality of recitations in each subject matter, and so on. In these activities considerable emphasis is placed on the externals of behavior in dress, manner, and speech. There must be no spots on shirt or collar, shoes must be shined, pupils must never pass by a teacher without stopping to give greeting, there must be no talking without permission, and the like. Great charts are kept in all the schools showing the performance of each row unit in every type of activity together with their total overall standing. "Who is best?" the charts ask, but the entries are not individuals but social units—rows, and later the "cells" of the Communist youth organization which reaches down to the primary grades.

At first it is the teacher who sets the standards. But soon, still in the first grade, a new wrinkle is introduced: Responsible monitors are designated in each row for each activity. In the beginning their job is only to keep track of the merits and

demerits assigned each row by the teacher. Different children act as monitors for different activities and, if one is to believe what the manual says, the monitors become very involved in the progress of their row. Then, too, group achievement is not without its rewards. From time to time the winning row gets to be photographed "in parade uniforms" (all Soviet children must wear uniforms in school), and this photograph is published in that pervasive Soviet institution, the wall newspaper. The significance of the achievements is still further enhanced, however, by the introduction of competition between *classes* so that the winning class and the winning row are visited by delegates from other classrooms in order to learn how to attain the same standard of excellence.

Now let us look more closely at this teacher-mediated monitoring process. In the beginning, we are told, the teacher attempts to focus the attention of children on the achievements of the group; that is, in our familiar phrase, she accentuates the positive. But gradually, "it becomes necessary to take account of negative facts which interfere with the activity of the class." As an example we are given the instance of a child who despite warnings continues to enter the classroom a few minutes after the bell has rung. The teacher decides that the time has come to evoke the group process in correcting such behavior. Accordingly, the next time that Serezha is late, the teacher stops him at the door and turns to the class with this question: "Children, is it helpful or not helpful to us to have Serezha come in late?" The answers are quick in coming. "It interferes, one shouldn't be late, he ought to come on time." "Well," says the teacher, "How can we help Serezha with this problem?" There are many suggestions: get together to buy him a watch, exile him from the classroom, send him to the director's office, or even to exile him from the school. But apparently these suggestions are either not appropriate or too extreme. The teacher, our text tells us, "helps the children find the right answer." She asks for a volunteer to stop by and pick Serezha up on the way to school. Many children offer to help in this mission.

But tragedy stalks. The next day it turns out that not only Serezha is late, but also the boy who promised to pick him up. Since they are both from the same group, their unit receives two sets

of demerits and falls to lowest place. Group members are keenly disappointed. "Serezha especially suffered much and felt himself responsible, but equal blame was felt by his companion who had forgotten to stop in for him."

In this way, both through concrete action and explanation, the teacher seeks to forge a spirit of group unity and responsibility. From time to time, she explains to the children the significance of what they are doing, the fact "that they have to learn to live together as one friendly family, since they will have to be learning together for all of the next ten years, and that for this reason one must learn how to help one's companions and to treat them decently."

By the time the children are in the second grade, the responsibilities expected of them are increased in complexity. For example, instead of simply recording the evaluations made by the teacher, the monitors are taught how to make the evaluations themselves. Since this is rather difficult, especially in judging homework assignments, in the beginning two monitors are assigned to every task. In this way, our text tells us, they can help each other in doing a good job of evaluation.

Here is a third grade classroom:

Class 3-B is just an ordinary class; it's not especially well disciplined nor is it outstandingly industrious. It has its lazy members and its responsible ones, quiet ones and active ones, daring, shy, and immodest ones.

The teacher has led this class now for three years, and she has earned the affection, respect, and acceptance as an authority from her pupils. Her word is law for them.

The bell has rung, but the teacher has not yet arrived. She has delayed deliberately in order to check how the class will conduct itself.

In the class all is quiet. After the noisy class break, it isn't so easy to mobilize yourself and to quell the restlessness within you! Two monitors at the desk silently observe the class. On their faces is reflected the full importance and seriousness of the job they are performing. But there is no need for them to make any reprimands: the youngsters with pleasure and pride maintain scrupulous discipline; they are proud of the fact that their class conducts itself in a manner that merits the confidence of the teacher. And when the teacher enters and quietly says be seated, all understand that she deliberately refrains from praising them for the quiet and order, since in their class it could not be otherwise.

During the lesson, the teacher gives an exceptional

amount of attention to collective competition between "links." (The links are the smallest unit of the Communist youth organization at this age level.) Throughout the entire lesson the youngsters are constantly hearing which link has best prepared its lesson, which link has done the best at numbers, which is the most disciplined, which has turned in the best work.

The best link not only gets a verbal positive evaluation but receives the right to leave the classroom first during the break and to have its notebooks checked before the others. As a result the links receive the benefit of collective education, common responsibility, and mutual aid.

"What are you fooling around for? You're holding up the whole link," whispers Kolya to his neighbor during the preparation period for the lesson. And during the break he teaches her how better to organize her books and pads in her knapsack.

"Count more carefully," says Olya to her girl friend. "See, on account of you our link got behind today. You come to me and we'll count together at home."

In the third grade still another innovation is introduced. The monitors are taught not only to evaluate but to state their criticisms publicly.

Here is a typical picture. It is the beginning of the lesson. In the first row the link leader reports basing his comments on information submitted by the sanitarian and other responsible monitors: "Today Valadya did the wrong problem. Masha didn't write neatly and forgot to underline the right words in her lesson, Alyoshi had a dirty shirt collar."

The other link leaders make similar reports (the Pioneers are sitting by rows).

The youngsters are not offended by this procedure: they understand that the link leaders are not just tattle-telling but simply fulfilling their duty. It doesn't even occur to the monitors and sanitarians to conceal the shortcomings of their comrades. They feel that they are doing their job well precisely when they notice one or another defect.

Also in the third grade, the teacher introduces still another procedure. She now proposes that the children enter into competition with the monitors, and see if they can beat the monitor at his own game by criticizing themselves. "The results were spectacular: if the monitor was able to talk only about four or five members of the row, there would be supplementary reports about their own shortcomings from as many as eight or ten pupils."

To what extent is this picture overdrawn? Although I have no direct evidence, the accounts

I heard from participants in the process lend credence to the descriptions in the manual. For example, I recall a conversation with three elementary school teachers, all men, whom I had met by chance in a restaurant. They were curious about discipline techniques used in American schools. After I had given several examples, I was interrupted: "But how do you use the collective?" When I replied that we really did not use the classroom group in any systematic way, my three companions were puzzled. "But how do you keep discipline?"

Now it was my turn to ask for examples. "All right," came the answer. "Let us suppose that 10-year-old Vanya is pulling Anya's curls. If he doesn't stop the first time I speak to him, all I need do is mention it again in the group's presence; then I can be reasonably sure that before the class meets again the boy will be talked to by the officers of his Pioneer link. They will remind him that his behavior reflects on the reputation of the link."

"And what if he persists?"

"Then he may have to appear before his link—or even the entire collective—who will explain his misbehavior to him and determine his punishment."

"What punishment?"

"Various measures. He may just be censured, or if his conduct is regarded as serious, he may be expelled from membership. Very often he himself will acknowledge his faults before the group."

Nor does the process of social criticism and control stop with the school. Our manual tells us, for example, that parents submit periodic reports to the school collective on the behavior of the child at home. One may wonder how parents can be depended on to turn in truthful accounts. Part of the answer was supplied to me in a conversation with a Soviet agricultural expert. In response to my questions, he explained that, no matter what a person's job, the collective at his place of work always took an active interest in his family life. Thus a representative would come to the worker's home to observe and talk with his wife and children. And if any undesirable features were noted, these would be reported back to the collective.

I asked for an example.

"Well, suppose the representative were to notice that my wife and I quarreled in front of the chil-

dren [my companion shook his head]. That would be bad. They would speak to me about it and remind me of my responsibilities for training my children to be good citizens."

I pointed out how different the situation was in America where a man's home was considered a private sanctuary so that, for example, psychologists like myself often had a great deal of difficulty in getting into homes to talk with parents or to observe children.

"Yes," my companion responded. "That's one of the strange things about your system in the West. The family is separated from the rest of society. That's not good. It's bad for the family and bad for society." He paused for a moment, lost in thought. "I suppose," he went on, "if my wife didn't want to let the representative in, she could ask him to leave. But then at work, I should feel ashamed." (He hung his head to emphasize the point.) "Ivanov," they would say, "has an uncultured wife."

But it would be a mistake to conclude that Soviet methods of character education and social control are based primarily on negative criticism. On the contrary, in their approach there is as much of the carrot as the stick. But the carrot is given not merely as a reward for individual performance but explicitly for the child's contribution to group achievement. The great charts emblazoned "Who IS Best?" which bedeck the halls and walls of every classroom have as entries the names not of individuals pupils but of rows and links (the link is the smallest unit of Communist youth organization, which of course reaches into every classroom, from the first grade on). It is the winning unit that gets rewarded by a pennant, a special privilege, or by having their picture taken in "parade uniforms." And when praise is given, as it frequently is, to an individual child, the group referent is always there: "Today Peter helped Kate and as a result his unit did not get behind the rest."

Helping other members of one's collective and appreciating their contributions—themes that are much stressed in Soviet character training—become matters of enlightened self-interest, since the grade that each person receives depends on the overall performance of his unit. Thus the good student finds it to his advantage to help the poor one. The same principle is carried over to the group

level with champion rows and classes being made responsible for the performance of poorer ones.

Here, then, are the procedures employed in Soviet character education. As a result of Khrushchev's educational reforms, they may be expected to receive even wider application in the years to come, for, in connection with these reforms, several new types of educational institutions are to be developed on a massive scale. The most important of these is the "internat," or boarding school, in which youngsters are to be entered as early as three months of age with parents visiting only on weekends. The internat is described in the theses announcing the reforms as the kind of school which "creates the most favorable conditions for the education and communist upbringing of the rising generation" (Communist Party of Soviet Russia, 1958). The number of boarding schools in the USSR is to be increased during the current seven-year plan from a 1958 level of 180,000 to 2,500,000 in 1965 (figures cited in *Pravda*, November 18, 1958), and according to I. A. Kairov, head of the Academy of Pedagogical Sciences, "No one can doubt that, as material conditions are created, the usual general educational school will be supplanted by the boarding school" (Kairov, 1960).

If this prophecy is fulfilled, we may expect that in the years to come the great majority of Soviet children (and children in some other countries of the Communist bloc as well) will from the first year of life onward be spending their formative period in collective settings and will be exposed daily to the techniques of collective socialization we have been describing. It is therefore a matter of considerable practical and scientific interest to identify the salient features of these techniques and subject them to research study, in so far as this becomes possible within the framework of our own society.

GUIDING PRINCIPLES OF THE SOVIET APPROACH TO CHARACTER TRAINING

As a first approximation, we may list the following as distinguishing characteristics or guiding principles of communist methods of character education.

1. The peer collective (under adult leadership) rivals and early surpasses the family as the principal agent of socialization.

2. Competition between groups is utilized as the principal mechanism for motivating achievement of behavior norms.

3. The behavior of the individual is evaluated primarily in terms of its relevance to the goals and achievements of the collective.

4. Rewards and punishments are frequently given on a group basis; that is to say, the entire group benefits or suffers as a consequence of the conduct of individual members.

5. As soon as possible, the tasks of evaluating the behavior of individuals and of dispensing rewards and sanctions is delegated to the members of the collective.

6. The principal methods of social control are public recognition and public criticism, with explicit training and practice being given in these activities. Specifically, each member of the collective is encouraged to observe deviant behavior by his fellows and is given opportunity to report his observations to the group. Reporting on one's peers is esteemed and rewarded as a civic duty.

7. Group criticism becomes the vehicle for training in self-criticism in the presence of one's peers. Such public self-criticism is regarded as a powerful mechanism for maintaining and enhancing commitment to approved standards of behavior, as well as the method of choice for bringing deviants back into line.

There are of course many other important features of the Soviet approach to socialization, but the seven listed above are those which present the greatest contrast to the patterns we employ in the West. It is for this reason that they are selected for special consideration here. We shall now proceed to examine each feature in greater detail with particular attention to the research ideas which it may generate.

THE FAMILY VERSUS THE COLLECTIVE

American theory and research on moral development have given almost exclusive emphasis to the family as the principal context and agent of socialization. The Soviet pattern, with its predominant emphasis on the collective, therefore raises the question of how these two socializing agents may differ in the nature and effect of the techniques they employ. To put the problem in another way: What types of socialization process and character structure emerge under the predomi-

nant influence of one or the other agent, or a combination of the two?

Stated in this form, the question seems an obvious and important one. Yet, to the writer's knowledge, research to date has little to offer in reply. True, there have been studies of personality development in several diverse types of children's groups who, for one reason or another, have grown up outside the context of the nuclear family. But for several reasons these studies do not shed much light on the problem at hand. The limitation springs in part from the highly specialized character of the groups investigated: youngsters removed to residential nurseries during war time (Burlingham & A. Freud, 1944), children rescued from Nazi concentration camps (A. Freud & Dann, 1954), delinquent gangs (Cohen, 1955; Cohen & Short, 1958; W. Miller, 1958; Thrasher, 1936; Whyte, 1943), and kibbutz children (Caplan, 1953; Faigin, 1958; Irvine, 1952; Rabin, 1958; Spiro, 1958).

Second, by and large these investigations take the form of clinical or case studies focusing on the particular problem at hand; they lack the structured design and comparative frame of reference which enhance the possibility of recognizing important differences, distinguishing characteristics, functional relationships. The advantages of these strategic devices are evidenced in the researches which employ them. Thus in a comparative ethnographic study, Eisenstadt (1956) demonstrated that peer collectives are most likely to develop in a society when there is marked discontinuity between values and role allocations in the family and in the adult world. Exploiting another kind of naturalistic experiment, two investigations (Haire & Morrison, 1957; Rosen, 1955) have studied situations in which parental values conflict with those of the peer group, and have found in each instance that although both sources are influential, the peer group tends to outweigh the parent in the age range studied (12 to 18). The research bearing most directly on the problem at hand is Boehm's comparative study (1957) of conscience development in Swiss and American children. She finds that the latter transfer parent dependence to peer dependence at an earlier age, and that

One result of this earlier transferring appears to be that the American child's conscience becomes less egocentric and interiorizes earlier than does that of the Swiss child.

There is, however, some indication that the content of conscience differs in these two types of societies. Whereas the American child's conscience is turned, primarily, toward social adjustment, the Swiss child's is geared toward character improvement (1957, pp. 91-92).

The principal shortcoming of all these studies for the issue at hand, however, is their failure to examine and analyze their data from the point of view of the group processes of socialization that may be occurring in the collective setting outside the family. To the extent that socialization is dealt with at all in these investigations, it is treated in conventional fashion with attention accorded primarily to the behavior of a parent or a parent surrogate toward the child. Such a restricted focus is of course understandable, given the traditional emphasis in Western culture, reflected in scientific work, on the centrality of the parent-child relationship in the process of upbringing. It is this circumscribed conception which probably accounts for the fact that Western personality theory and research, highly developed as they are in comparison with their Russian counterparts (Bronfenbrenner, 1961c), offer little basis for ready-made hypotheses bearing on processes and effects of socialization in collective settings.

Nevertheless, despite their limitations, the existing researches have considerable potential value. To begin with, many of them, especially the clinical and case studies, contain excellent descriptive data that could be re-examined from our new perspective to discover whether they might not shed some light on phenomena of collective socialization. Second, the more structured investigations suggest research designs that might profitably be employed in future work. The first research paradigm, exemplified by both the Eisenstadt and Boehm studies, makes use of groups with contrasting degrees of exposure to socialization in family versus collective settings. Such contrasts are understandably found most readily in different cultures, but under these circumstances interpretation is complicated by the presence of other factors associated with each culture that might account for the observed differences in character development. Eisenstadt endeavors to circumvent this difficulty by using data from a large number of societies in which other factors besides those under immediate investigation may be expected to vary widely. While highly useful, particularly in the exploratory stages of research, this approach has its

serious limitations. Either one must make do with only partially adequate data gathered by other investigators with other objectives in mind, or one must carry out new specially designed cross-cultural studies in a substantial number of different settings.

But there is an alternative strategy which, to the writer's knowledge, has hardly been exploited to date. It involves finding groups exposed to different agents of socialization within the same or closely comparable cultural contexts. Such comparable groups may be difficult to discover, but once identified they offer rich opportunities for research on differential processes and outcomes of character training in familial versus peer-group settings. The ideal contrast in this regard would be two groups of children from the same social milieu, one group having attended boarding school from an early age, the other raised at home with minimal and relatively late exposure to group influences in school or peer group. Obviously this ideal would be almost impossible to achieve but it can certainly be approximated, especially in such countries as England, Switzerland, or, should the opportunity arise, the Soviet Union, where boarding schools are relatively common; or in Israel, with a focus on the comparison between children raised in the kibbutz, where the young are reared primarily outside the family in collective settings, and the moshav, where adult life is collectively organized but children are brought up in the nuclear family. The last contrast should be particularly instructive since collective ideology would be present in both settings but the principal agent of socialization would differ.

Another research opportunity found more easily outside the United States is that provided by families living in relative geographic isolation. An extreme example in a modern Western country occurs in Norway, where some families live in mountainous areas that remain isolated during a large part of the year. A current study of this group by Aubert, Tiller, and their associates at the Oslo Institute for Social Research should shed light on the character development of children raised in a nuclear family under conditions of minimal contact with others outside the home.

The American scene is of course not without its possibilities for research along the same lines, even if over a somewhat more restricted range. Thus we, too, have our boarding schools, and although

their enrollment tends to be limited to children who are highly selected on socio-economic, religious, or psychological characteristics, an appropriately matched sample of controls not attending boarding school can usually be found. Indeed, to minimize differences in family values and background one could make use of those private schools which enroll both boarding and day pupils. Similarly, instances of families living in geographic isolation can still be found especially in the receding remnants of the American frontier in mountains, deserts, and north country; moreover, with the occasional influx of skilled technicians to such areas, the possibilities arise of studying families who are living in an isolation which is primarily physical and not cultural as well. Finally, among the run-of-the-mill families in any American community there is likely to be an appreciable range of variation in the amount of socialization children experience outside the nuclear family. Some youngsters participate from an early age in nursery schools, camps, clubs, gangs, and other peer-group settings both with and without adult supervision. Others remain relatively isolated from peers until they enter kindergarten or first grade and, even thereafter extrafamilial associations may be minimal. A study of differences in character development in children exposed to varying degrees of familial versus extrafamilial socialization could be illuminating.

The last proposal highlights a difficulty plaguing all of the research designs outlined above. It is obvious that families in which contact with peers is postponed and minimized are likely to exhibit different value systems and techniques of socialization from those in which children are permitted or encouraged to have early associations outside the home. Such differences will be found also even in the "cleanest" and most closely matched comparisons. Thus day and boarding pupils in the same school will still differ in family background, values, and child-rearing practices. The fact that particular values and techniques may be functionally linked to the setting in which they occur does not remove the necessity of identifying them and taking them into account in the interpretation of results and in the design of subsequent studies.

Comparing groups with differing socialization experience is not the only strategy available for studying the differential influences of the family versus the peer collective. The researches of

Rosen and Haire mentioned above suggest still another gambit, that of comparing the relative effects of both types of influence on the same children. The strategy here involves finding instances in which familial and peer-group standards conflict in varying degrees and to observe which influence prevails under what circumstances.

The last strategy focuses even more sharply the question of what dependent variables should be investigated in studies of this kind. Quite naturally one thinks first of the variables that have been emphasized in American studies of moral development; namely, projective measures of conscience and guilt of the type employed by Allin-smith (1957, 1960), Aronfreed (1959, 1960), Hoffman (1961), and D. R. Miller and Swanson (1960), or the behavioral measures of similar variables growing out of the work of Whiting and Sears and their colleagues at the Harvard Laboratory of Human Development (Sears, Maccoby, & Levin, 1957; Whiting, 1954; Whiting & Child, 1953) and implemented most recently in a study of antecedents of resistance to temptation conducted by Burton, Maccoby, and Allin-smith (undated).

It would clearly be a matter of considerable theoretical and practical interest whether children experiencing different ratios of exposure to socialization within the family versus within the peer group exhibit differences in types and degrees of self-blame, tendency to blame others, resistance to temptation or in any of the other patterns of moral judgment commonly examined in current research on this topic. The psychoanalytic theories on which most of these instruments are based would lead one to expect stronger internalization and self-blame among children raised primarily within the nuclear family, and this prediction receives at least indirect support from the one study we have found (Boehm, 1957) that comes near to dealing with the problem. But much depends on the particular socialization processes employed in one or another collective setting. In the absence of adequate data or theory dealing directly with this issue, we can only resort to speculation on the basis of what knowledge we do have about socialization processes in general. And since this knowledge is based almost entirely on studies of the family, we are forced into the risk expedient of arguing by analogy. Accordingly, in order to try to become aware both of the possibilities and

pitfalls of this approach, we shall begin by assuming isomorphism and then call the assumption into question.

What are the principal generalizations, then, to be drawn from existing studies of factors in the nuclear family affecting the moral development of the child? A growing number of independent researches (Bronfenbrenner, 1961a, 1961b, 1961d; Hoffman, 1961; D. R. Miller & Swanson, 1958, 1960; Sears et al., 1957) point to the conclusion that the internalization of moral standards is a function of the degree and ratio of parental affection and discipline. Specifically, internalization appears to be maximized when both affection and discipline are high. When parents rely primarily on the assertion of power in a relatively non-affectionate context, the child is likely to be responsive only to external controls (i.e., fear of punishment). When both affection and discipline are low, or when the former appreciably outweighs the latter, moral standards tend to be weak or ineffective and the child resorts to distortive mechanisms such as denial or displacement (for example, unjustly blaming others). But internalization can also take nonadaptive forms characterized by inflexibility or excessive self-blame. Such rigid or self-deprecatory standards are especially likely to arise when parents are generally affectionate but rely on discipline techniques which "involve ego attack and depreciation of the child" (Hoffman, 1961, p. 5). In contrast, parents of children whose moral standards are more realistic and responsive to extenuating circumstances tend to "appeal more to approach motives." Hoffman, in the most recent and extensive study of this problem, elaborates on the differences between the two groups of parents as follows:

The two groups are similar in that their parental discipline relies primarily on the frequent use of inductive techniques within an affectionate context, and the infrequent use of power assertion. What mainly characterizes and differentiates [that adaptive group] is that they report their parents as more frequently using techniques that communicate disappointment in the child for not living up to the parent's expectations and less frequently as using ego attack and love withdrawal techniques. It seems to us that the expression of disappointment, while it indicates that the parent has in a sense hurt the child, also conveys the feeling that the child is capable of living up to an ideal (Hoffman, 1961, pp. 37-38).

Pursuing our argument by analogy and shifting the context from the family to the school collective,

we may ask whether any of these patterns of socialization apply to the Soviet case and, if so, what kinds of consequences in moral development we might expect. With due regard to the tentative and largely impressionistic character of this initial comparison, it is nevertheless striking to note the correspondence between the techniques recommended in our Soviet manual and Hoffman's description of the pattern of socialization most likely to lead to the internalization of realistic and appropriately flexible moral standards. Both situations involve high levels of discipline and support with the primary emphasis on an appeal to motives of approach rather than of avoidance. (E.g., "How can we help Serezha with his problem?") Also in both instances, there is infrequent use of power assertion. Finally, the many examples of group criticism appearing in the Soviet manual are surely more appropriately described in Hoffman's terminology not as an "ego attack and depreciation of the child" but precisely as statements "that communicate disappointment in the child for not living up to expectations," which "convey the feeling that the child is capable of living up to an ideal."

If the analogy is a valid one, and if the Russians actually practice what they preach, we should therefore expect that the pattern of socialization in the peer collective would lead to the development of the same quality of moral standards achieved by an optimal balance of support and control in the American nuclear family. The two "ifs," however, can hardly be allowed to stand unquestioned. To consider the purely empirical question first, it seems likely that, as in every society, actual practice in Soviet society falls somewhat short of the ideal, or at least deviates from it. The nature of this deviation must await the results of systematic objective observations in Soviet schoolrooms. And it may be some time before such data are made available by either Soviet or Western behavioral scientists. In the meanwhile, however, there is nothing to prevent American workers from initiating a systematic program of research on group atmospheres in the classroom or other peer-collective settings and observing, through naturalistic or contrived experiments, the differential effects of various ratios of support and control on the development of moral standards and behavior. Indeed, the prototype of such research already exists in the classic experi-

ment of Lewin, Lippitt, and White (1939), and it is both regrettable and surprising that this study has not been followed up by others in a systematic program of research on socialization processes in peer-group settings. Perhaps White and Lippitt's (1960) recently published reanalysis of their data will help stimulate a renewed interest in this neglected area.

Our second "if" gives rise to even more questions and complexities. It seems hardly likely that generalizations derived from studies of the American family could be applied directly to the analysis of socialization processes in the classroom, and a Soviet classroom at that. To begin with, such an analogy assumes that the teacher and the classroom group have re-enforcement power equivalent to that of the parent. This assumption can be challenged from both directions. On the one hand psychoanalytic theory, and probably common belief as well, discounts the possibility that any other social group could approach the family in the strength of its affectional and controlling influences. Yet, a growing body of research stemming from the work of Asch (1956) demonstrates that the group is capable of exerting tremendously powerful forces toward conformity, even to the extent of inducing distortions in reality perception. The question of the relative potential of the family and the peer group as agents of socialization therefore remains an open one resolvable only through empirical research.

The issue is complicated further by the fact that, to a greater or lesser degree, the child is usually exposed to some measure of socialization within the family before he enters the collective. In fact the responsiveness of the child to socialization in a group setting may even depend on prior experience in the family. It is noteworthy in this connection that, up until now, most of the children who have been exposed to Soviet methods of character education in school have spent the first seven years of their lives in the bosom of the family. Should the preceding speculation be valid, the Russians may experience some difficulty with their methods once they begin, as they propose, to place children in collectives during the first year of life.

Apart from questions about the relative socializing power of the family and the collective, there are of course important differences in the social structure of the two systems. Yet, while influ-

ential theorists like S. Freud (1948) and Parsons and Bales (1955) have stressed the analogy between parent and children on the one hand and group leader and group members on the other, to this writer's knowledge little attention has been given to the theoretical implications for the process of socialization of such obvious differences as group size, range of role differentiation, specificity of function, duration through time, and their psychological consequences in degree of ego involvement. At the same time, so far as Soviet society is concerned, we must take note of the two-way theme constantly reiterated in Russian writings on character education that the family must become a collective, and the collective must take on the characteristics of a family. As a result, it is conceivable that over time the differences between these two types of social structure in Soviet society will become attenuated and the similarities maximized. This possibility highlights the value of comparative longitudinal studies of the changing character of Western and Communist family and peer-group structures. Such studies would of course have special significance as necessary background for research on character development.

The preceding consideration points directly to the most important difference between American and Soviet socialization practice, whether in the family or out. This is the matter of ideological content and the special procedures which this content inspires. It is this content and procedure which are the burden of the remaining six of the guiding principles we have listed earlier.

GROUP INCENTIVES

Principles 2-4 emphasize the importance of the collective over the individual as the frame of reference for evaluating behavior and distributing punishments and rewards. As the principles indicate, there are three elements to the pattern: Desired behavior is motivated through competition between groups rather than between individuals; behavior is judged in terms of its implication for the achievement and reputation of the group; and rewards and punishments are given on a group basis so that all members of the group stand to gain or lose from the actions of each individual.

The arousal of motivation through competition between groups is certainly not an unfamiliar phenomenon in American society or in the American

schoolroom. But even without the support of systematic evidence, one could confidently assert that this motivating device used to be employed far more frequently three or more decades ago than it is today. This same trend is dramatically reflected in the character of research studies being carried out in the late twenties and thirties as compared with the present time. Thus Murphy, Murphy, and Newcomb in the 1937 revision of their *Experimental Social Psychology* (pp. 476-493) tabulate as many as 25 studies dealing with competition in children's groups, many of them focusing directly on the issue of group versus individual incentive. In contrast, a contemporary survey of group research (Thibaut & Kelley, 1959) scarcely mentions the topic. Even though the earlier studies of group incentives focus almost entirely on motor and intellectual tasks rather than attitude formation, the results are instructive. Group competition generally increases output but is less effective as an incentive than self-oriented or individual competition. As Murphy, Murphy, and Newcomb properly caution, however, "Any discussion of . . . studies of the effects of incentives must be seen in relation to the cultural background which has set so much store by individual achievement, and has nourished this movement to find ways of stimulating the greatest achievement in the individual" (1937, p. 501).

This caveat carries implications for a potentially fruitful research design in which children with contrasting individualistic versus collectivistic backgrounds would be exposed to both types of competitive situations and their performance observed. Although one's first impulse is to discount such a proposal on the practical ground that it would be virtually impossible to find children with such diverse backgrounds in the same culture, further consideration suggests that good research opportunities do exist. The most obvious example is Israel, where both types of orientation are common even within the same ethnic and socio-economic subgroups. Furthermore, the contrast can be approximated in our own society, since many private schools differ widely precisely along this continuum. For example, many progressive schools are ultra-individualistic in their philosophy and practice whereas others would probably be shocked to learn that their emphasis on subgroup solidarity and competition is properly described as collectivistic.

But in view of the dearth of research studies of the phenomenon over the last 25 years, there would be much to learn from research on the effects of group incentives even with children coming from the predominantly individualistic background characteristic of American society. On the independent side, these researches should give attention to such specific variables as the motivating power of intergroup versus interindividual competition, evaluation of individual behavior in terms of its contribution to the status of the group as a whole, and the giving of punishments and rewards on a group basis. On the dependent side, the spectrum of variables should be broadened beyond problem solving to include personality measures such as the indices of moral standards employed in much current research as well as other relevant social attitudes and behaviors. These important additions are more appropriately discussed after we have completed examination of the last three of the distinguishing characteristics of Soviet methods of character education—these having to do with group criticism and self-criticism.

GROUP CRITICISM AND SELF-CRITICISM

The feature of Soviet socialization practices which clashes most sharply with the American pattern is the Russians' widespread resort to the procedure of criticizing others and one's self in public. The practice is common throughout all levels of Soviet society from school, farm, and factory to the highest echelons of the party. Thus by being taught these techniques in early childhood, Soviet youth are being prepared in patterns of response that will be expected and even required of them throughout their life span. Since such practices are uncommon in American society, it is not surprising that they have not been subjected to research study in any direct way. As already noted, however, the work of Asch and others (Asch, 1956; Berenda, 1950) testifies to the power of an overwhelming majority forcing the deviant flict with the reality perceptions of the experiments members of the majority do not engage in criticism but simply give responses which conflict with the reality perceptions of the experimental subject. The effect on the subject is to lead him, in an appreciable number of instances, to change his own response in the direction of the majority. In a sense, such alteration represents

a confession of his own previous "error." Obviously, the experiments cannot be said to reproduce explicit features of Soviet group criticism and self-criticism, but the fit could be made much closer by instructing confederates to engage in criticism and by asking the subject to admit that his previous responses had not been correct. Such variations would of course make even more salient questions of scientific ethics that invariably arise when experiments of this kind are viewed from the perspective of the Western Judeo-Christian moral tradition. (It is doubtful, incidentally, that such questions would ever be raised in a Communist society.) Still ways can probably be found to conduct experiments on the processes of group criticism and self-criticism without doing serious violence to our own ethical traditions.

The fact remains, however, that such socialization procedures as group criticism and self-criticism have moral implications and hence may be expected to have moral consequences; that is to say, they are likely to influence the moral attitudes, actions, and character structure of the individuals on whom they are employed. Moreover, it is doubtful whether such consequences are fully or even adequately reflected by the measures of conscience and guilt currently employed in research on moral development. Certainly it would be important to know about the nature of conscience and guilt in the "new Soviet men" who have been exposed to a lifetime of experience in group criticism and self-criticism. But in building "socialist morality" Soviet educators are less concerned with such questions as whether the individual tends to blame others or himself than with his sense of commitment to the collective, especially in the face of competing individualistic values and preferences.

Accordingly, perhaps the most important research implication to be drawn from our examination of Soviet methods of character education is the necessity of expanding the spectrum of what we conceive as moral development beyond the characteristically Judeo-Christian concern with personal responsibility and guilt to a consideration of the broader moral issues inherent in the relation of man to man and of the individual to his society.

We have tried to take some beginning steps in this direction in the research on character development being conducted at Cornell by Bronfenbren-

ner, Devereux, and Suci. Specifically, as a point of departure we have distinguished five hypothetical extreme types of character structure representing the presumed products of five divergent patterns of socialization and moral development in children and adolescents. These five are tentatively designated as self-oriented, adult-oriented, peer-oriented, collective-oriented, and objectively-principled character structures.²

The self-oriented child is motivated primarily by impulses of self-gratification without regard to the desires or expectations of others or to internalized standards. Such an asocial and amoral orientation is presumed to arise when the child's parents are so permissive, indifferent, inconsistent, or indulgent that immediate self-indulgence becomes the practicable and, in the long run, most rewarding course of action for the child. The development of this personality type is further facilitated by participation in peer groups which encourage self-indulgence and exact neither loyalty nor discipline from their members.

The adult-oriented child is one who accepts parental strictures and values as final and immutable. He is completely submissive to parental authority and the moral standards imposed by the parent. This orientation generalizes to adult authority outside the home in school and community. In other words, here is the oversocialized "good child," already a little adult, who causes no trouble but is relatively incapable of initiative and leadership. He is presumed to be the product of intensive socialization within the nuclear family but with minimal experience outside the home.

In contrast, the peer-oriented child is an adaptive conformist who goes along with the group and readily accepts every shift in group opinion or conduct. This is the "outer-directed" character type of Riesman's (1950) typology or the future "organization man" described by Whyte (1956). His values and preferences reflect the momentary sentiments of his social set. The optimal circumstances for the development of this personality type involve a combination of parents who are either permissive or actively encourage conformity to group norms, accompanied by early and extensive participation in peer groups requiring

such conformity as the price of acceptance. The norms of such groups, however, are ephemeral in character and imply no consistent standards or goals.

The prototype of the collective-oriented personality is of course the "new Soviet man"—a person committed to a firm and enduring set of values centering around the achievement of enduring group standards and goals. These group values take precedence over individual desires or obligations of particular interpersonal relationships. Such an orientation presumably springs from a developmental history in which from the very outset the parents place the needs and demands of the collective above those of the child or of particular family members. Affection and discipline are bestowed in the name and interests of the social group and the child spends most of his formative years in collective settings under the guidance of adults and leaders who train him in the skills and values of collective living.

Finally, the behavior of the objectively-principled child is guided by values which, although learned through experience in the family and in peer groups, do not bind him to undeviating conformity to the standards of the one or the other. This is the "inner-directed" personality of Riesman's (1950) typology. On one occasion he may act in accordance with the standards of his parents, on another with the mores of the peer group, or in still a third instance he may take a path which deviates from the preferences of both parents and peers. There is, however, a consistency in pattern of response from one situation to the next which reflects the child's own now autonomous standards of conduct. The developmental history posited for this type of character structure assumes a strong, differentiated family organization with high levels of affection and discipline but at the same time considerable opportunity granted to the child to participate in selected but varied peer-group experiences both with and without adult supervision. These peer groups, in turn, are also characterized by high levels of affectional involvement and their own particular disciplinary codes. The hypothesis implicit in this developmental sequence is that an autonomous set of moral standards is developed from having to cope with different types of discipline in a variety of basically accepting social contexts, so that the child is forced to compare and

² A similar typology, but unlinked to particular patterns and agents of socialization, has recently been proposed by Peck and Havighurst (1960).

come to terms with different codes of behavior imposed by different persons or groups each of whom is supportive and wins his liking and respect. This hypothesis, though highly speculative, derives in part from some of our research results (Bronfenbrenner, 1961a, 1961b, 1961d) which suggested that children who are rated by teachers and peers as high in social responsibility and initiative tend to come from families where parental affection and discipline are relatively strong, parental roles are moderately differentiated (e.g., one parent tends to exercise authority slightly more than the other), but the child also participates in many group activities outside the home. Unfortunately, in these initial studies very little information was obtained about the child's experiences in peer-group settings.

We are currently in the process of devising instruments for measuring the five types of character structure outlined above as these are manifested both in attitudes and behavior. Several of our instruments have yielded promising results in pilot studies but have also brought to light shortcomings in theory and method. The principal value of the approach in its present stage of development is its capacity to generate fruitful hypotheses and research designs for the investigation of character development as a social process.

The last consideration brings us back to the main objective of this paper. Its primary purpose is not to argue for a particular theoretical orientation or methodology; the sole and central aim is to encourage and assist behavioral scientists and educators to give careful attention to the problems and processes implicit in collective methods of character education such as those employed in the Soviet Union and elsewhere in the Communist bloc. We have tried to show that these problems and processes have considerable social relevance and theoretical importance far beyond their immediate social context. We have also attempted to demonstrate that they can be made amenable to empirical investigation. This paper will have served its purpose if it contributes to a renewal of research interest in the study of extrafamilial groups as socializing agents, for such scientific study should do much to enhance our understanding of intriguing social processes through which human character is formed.

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COUNSELING AND PSYCHOTHERAPY:

SPLIT PERSONALITY OR SIAMESE TWINS?

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MANY psychologists claim to engage in counseling; others claim to practice psychotherapy; some would say they do both. More often than not, we suspect, the self-description is contingent on the individual's willingness (or unwillingness) to work with clients who have been diagnosed, by self or others, as having "emotional problems." In some cases, the label may be related to whether or not the practitioner tends to place primary focus on emotive facets of behavior, regardless of the client's diagnostic status.

Clinical psychologists seem relatively content with this situation. They are secure in the belief that the term psychotherapy is generally understood. They take comfort in the wide acceptance and high prestige which the art enjoys with the professional community and with the public. This position is further reinforced by the popularization of abnormal psychology, psychiatry, and psychotherapeutic techniques in the mass media.

Counseling psychologists, on the other hand, apparently lack any comforting group conviction about what counseling is. The ambiguity of the term is a perennial topic of discussion, in dignified journal articles and learned symposia as well as in coffee cup seminars, without notable progress in the direction of agreement.

A bewildering variety of functions have been gathered under the general rubric, "counseling." A listing would include educative, evaluative, consultative, administrative, therapeutic, and advisory practices, with plenty of ground left to cover.

Brayfield (1961) has stated the problem forcefully. He has also conveyed the frustration of the counseling psychologist who, believing that "counseling" refers to something important, is unable to find the terminology adequate to describe or discuss it. We, too, are convinced that the current terminology is not adequate to communicate, with clear meaning, the psychologically complex work of the counseling psychologist. We also believe that strong action will be required to develop adequate, acceptable definitions in a discipline addicted to disagreement about basic terms.

The proposals which follow are made with the recognition that their usefulness depends on acceptance by the professional "body politic" which cannot be coerced by citing evidence or by appealing to theoretical authority. The meaning of a term or phrase is dependent on general acceptance, though much of our past theoretical and research work would lead us to conclude that some absolute meaning will be discovered in our data pools. The merits of these proposals are argued on the basis of the clarification they may provide and their fruitfulness in leading to researchable hypotheses.

DISENTANGLING PROCESS AND PRACTITIONER

The terms "psychotherapist" and "counselor" often are used as if the associated processes, psychotherapy and counseling, were plainly distinguishable and mutually exclusive activities. If this were true, these activities would indeed provide an obvious basis for identifying two independent specialties. In actual practice the specific activities of psychologists practicing these applied arts cannot be predicted accurately from their specialty designation alone. "Counselors" engage in psychotherapy and "psychotherapists" counsel. The only meaningful specialty designations within psychology are those like "clinical psychologist" and "counseling psychologist," as defined for membership purposes by the appropriate divisions of the American Psychological Association. These designations precisely identify the respective specialties, not on the basis of exclusive functions, but on the basis of a broad set of criteria involving type of training, professional setting, research interests, and the like; and are subject to redefinition at the will of the membership. On the other hand, terms such as "psychotherapy" or "counseling," which describe goal-related processes, can best be defined by studying those processes, without reference to the specialist using them.

A DEFINITION OF PSYCHOTHERAPY AS PROCESS

Psychotherapy can have reasonably clear meaning when viewed as a process and not as a profes-

sion. This meaning can be made more specific when modifiers such as client centered or psychoanalytic are also used.

In our view, psychotherapy denotes a process, usually implemented by interview techniques, which seeks to alter the client's receptor or response system in such a way that healthy behavior will occur in situations where unhealthy behavior has been typical. It is, in short, a kind of *relearning*, or *re-education*. It should also be emphasized that the old behavior is seen as pathological, and the new behavior is seen as healthy.

Psychotherapeutic processes aim to change the mechanisms of stimulus-response mediation in the direction of greater "healthfulness." In some theories, such as those identified with nondirective or client-centered techniques, attempts are made to achieve healthfulness in behavior as interpreted by the client's self-perception, hoping that changes will also be evident to others. Other techniques, such as the rational-emotive therapy of Ellis (1957, 1959a, 1959b), emphasize change in observable behavior, with the hope that self-perception will also change as a consequence. Regardless of variations in technique, however, psychotherapy deals with the pathological and seeks to cure.

A DEFINITION OF COUNSELING AS PROCESS

The situation in the realm of counseling is more troublesome. The term counseling has no traditional, generalized meaning other than the redundant expression, "the work done by counselors" or "a personalized helping relationship." The concept is not restricted to work done by counseling psychologists, or to work done within the psychologically oriented professions. To give greater specificity of meaning to the term requires more than redefinition. It might be possible to add to a definition such as "the use of datum and theory from the science of psychology as it bears relevance to the personalized helping relationship," such qualifiers as "by a certified or licensed psychologist," "by a qualified person," etc. However this would not resolve the problem. The terminology would still be inadequate to communicate, even within the field of psychology, what the counseling process is.

In order to describe the psychologically complex work done by the counseling psychologist, we believe

it is necessary to replace (rather than redefine) the term counseling, when used in reference to goal-related process, with unambiguous, theoretically useful concepts.

In contrast to clinical psychology, counseling psychology has not had a group of professional ancestors from whom to inherit a ready-made, well-established terminology for classifying a nonpathological clientele and for describing techniques used with this clientele. Counseling psychologists wishing to place the empirical data of their domain in the context of a dynamic psychology, have tended to borrow ideas which belong to the study of psychopathology. In recent years, this has led to counseling theory and research more appropriate to the process of psychotherapy, as we have defined it, than to processes historically relevant to the goals of counseling psychologists.

Such terms as repression, projection, and displacement have been used to explain the behavioral phenomena of underachievement, job dissatisfaction, vocational uncertainty, and the like. This approach makes it appear that conflicts, choices, problem-solving behavior, and every form of psychological distress is associated with some form of mental illness. It is as though problem situations would not exist but for pathological response tendencies on the part of the individual. Or if affective expression is involved to any degree, it would seem to follow, when viewed against a criterion of current treatment methodologies, that the behavior is pathological, since emotional involvement of any sort is characteristically dealt with by means developed (and generally validated) for the treatment of emotional illness. If all emotional distress is pathological, then a psychologist must either practice psychotherapy or limit his functions to diagnostic work and providing information or simple advisory assistance.

This point of view is discouraging and, we believe, fallacious. It is our intent to make a case for the legitimate area of professional concern which exists between the definable extremes of psychometrics and psychotherapy. In the following paragraphs, we will attempt to describe a kind of nonpathological emotional distress that is clearly the special province of the counseling psychologist, using terms growing out of the situations with which he works and the techniques he employs.

SOME PSYCHOLOGICAL VARIABLES RELEVANT TO THE COUNSELING SITUATION

The situations that lead one to seek the help of a counseling psychologist are descriptively as well as psychologically complex, but some groups of descriptive concepts can be identified, around which practitioners tend to organize their data. Even at this purely descriptive level, no listing of variables relevant to client behavior could hope to be exhaustive, or to satisfy the preferences of all counseling psychologists. We will list some, for purposes of discussion, and leave the system incomplete to permit the addition of other important factors.

1. Abilities-aptitudes: capacities inferred from performance or from test data validated against performance criteria
2. Interests: measured commonalities with vocational reference groups
3. Performance: quantitative measures of significant productive activity
4. Personality: individual differences in the emotional-affective realm
5. Tangible assets-liabilities: physical, social, or economic factors influencing opportunity
6. External pressures: pervasive environmental influences
7. Goals: client's preferred outcome of his present situation

Data related to these dimensions of client status are collected and used to select personnel, plan academic programs, suggest vocational objectives, resolve personal problems, plan budgets, resolve family disputes, and to perform any other function that can be gathered under that "cover-all" term, counseling. This list of diverse "counseling" functions suggests that there is no single goal-directed process by which counseling in general can be defined. There are a multitude of goals, each with a system of aims and procedures by which to achieve them. When these specific kinds of counseling are described, the result is a collection of unrelated functions which in no wise defines a unitary basic process.

Many of these separate kinds of counseling are readily describable, and are not at all likely to be confused with psychotherapy. However, when a counseling psychologist talks about "resolving personal problems," one might suspect that this is a method of smuggling psychotherapeutic techniques into his office. Many problems arise from attempts

to define "counseling" or "counseling psychology" or "psychological counseling," or most recently, "clinical counseling" in a way that includes or excludes particular processes related to specific goals. Novel meanings for familiar terms do not achieve general acceptance, and the resulting failure of communication adds to the conceptual confusion. It is this kind of maneuver that Brayfield (1961) is criticizing in his reaction to what he calls the "positive mental health kick."

In the remainder of this paper, we will try to describe and give a neutral name to one type of psychological distress that is not pathological. Related counseling goals will also be discussed. This is seen as a first step toward clarification of what, to us, is a truly confused conceptual area of applied psychology.

PSYCHOLOGICAL DISCORDANCE AS A SOURCE OF DISTRESS

When a client is unhappy because his goals call for abilities he lacks, or because he is required by external pressures to perform a job that is incompatible with his interests, it would be folly to label his distress neurotic. In fact, it would be easier to make a case for abnormality if he were undisturbed by such a situation. This kind of disturbance differs from pathology, in that it is judged to be appropriate to the realities of the client's situation. Still, personal problem-solving skills are impaired by this discordance-produced distress, just as they might be by pathological conditions.

People who seek counseling frequently complain of unhappiness related to incompatibilities among two or more aspects of their current situation. For example, inconsistencies may arise between interests and abilities, or abilities and performance, or goals and external pressures, and so on. Or, perhaps three or more of these factors may form an incompatible, discordant cluster. In such a situation, the counseling psychologist faces the task of helping an individual achieve harmony or some form of acceptable compromise among these discordant influences. While this paper is not concerned with a review of the literature, it is worth noting that the line of thought being developed finds support in research findings. There is a body of literature centered around investigation of the self-concept which contains many studies of psychological inconsistency. In particular, studies of actual self-concept in relation to idealized self-

concept indicate that discrepancies between these perceptions, which we would interpret as a form of discordance, are associated with emotional-motivational states (Wylie, 1961). Festinger and his associates have done some highly relevant work. He has developed an extensive theory of social behavior around a concept of cognitive dissonance. This kind of discordance is a discrepancy between belief and behavior, and Festinger has shown that this state of affairs has motivational characteristics (1947, pp. 18, 275-279, 291). The concept of discordance in the present paper can be viewed as an expansion of this conceptualization which includes the consequences of discrepancies among any subset of a very large number of psychological variables, of which we have listed several examples particularly relevant to the counseling situation.

PSYCHOLOGICAL DISCORDANCE REDUCTION

When a counseling psychologist seeks to help a client find techniques of resolving a discordant situation, he is practicing an art that easily can be confused with psychotherapy. We know of no unambiguous, concise term for this process, and have labeled it "psychological discordance reduction" for discussion purposes, and will hereafter abbreviate it by the initials PDR. PDR is a general term for the psychologically sophisticated counseling procedures through which a client learns to improvise discordance-reducing behaviors.

No attempt is made to represent PDR as a term synonymous with counseling but rather as a system of related processes with a common generalized goal which can be culled from the greater pool of work done by the counseling psychologist. This culling also helps make clear that not all types of counseling are relevant to a discussion of the relationship between counseling and psychotherapy. Using psychological information to help a young person choose an appropriate college would not easily be confused with psychotherapy. And, if such a situation does involve evidence of discordance, it is not necessarily of such a magnitude as to be accompanied by a marked degree of emotional distress.

Many of the functions usually classified as counseling deal neither with pathology nor with discordance. PDR stands distinctively apart from both psychotherapy and other types of counseling functions. It does not seek to alter old and well established response systems. Neither does it seek

to displace behaviors which have been judged pathological by the self or an observer-other. PDR refers to educative rather than re-educative processes. The object is to aid the individual by adding new responses or perceptions to his repertoire, which can be used to achieve a less discordant behavior pattern in the future.

Confusion can arise at this point unless it is firmly kept in mind that neither PDR nor psychotherapy is practiced exclusively by any one professional group. All psychologists who offer personal interview services of either type inevitably will become involved in many kinds of processes. It is an unfortunate fact that practitioners often identify themselves with one process, in part by studiously attempting to avoid the others. In cases involving emotional distress, this can only lead to failure in the total job of psychological treatment, unless psychopathology and discordance are mutually exclusive processes. Our own experience leads us to believe they are not. Distressed clients frequently seem to present either a primarily pathological or a primarily discordant situation with a secondary involvement in the alternative area. Or a client may fluctuate between psychotherapeutic needs and PDR or other counseling needs within a series of interviews, or even within a single interview. The following model attempts to clarify this situation.

A TWO-FACTOR THEORY OF PSYCHOLOGICAL DISTRESS

In Figure 1, psychopathology and psychological discordance have been plotted as two dimensions of a multivariate model. A third dimension labeled "decision making" represents only one more of the possible relevant variables which would exist in an "N" dimensional representation of the work of the counseling psychologist. The light vertical and horizontal lines divide this surface into regions of low, moderate, and high levels of discordance, psychopathology, or complexity of the decision-making process. Within some of these major regions we have indicated either PDR or psychotherapy (PT), or both, as relevant treatments. On the assumption that the various dimensions of behavior are uncorrelated, there would seem to be a set of situations in which *either* PDR or psychotherapy would be an appropriate treatment. This state of affairs would offer some justification for the existence of service centers devoted ex-

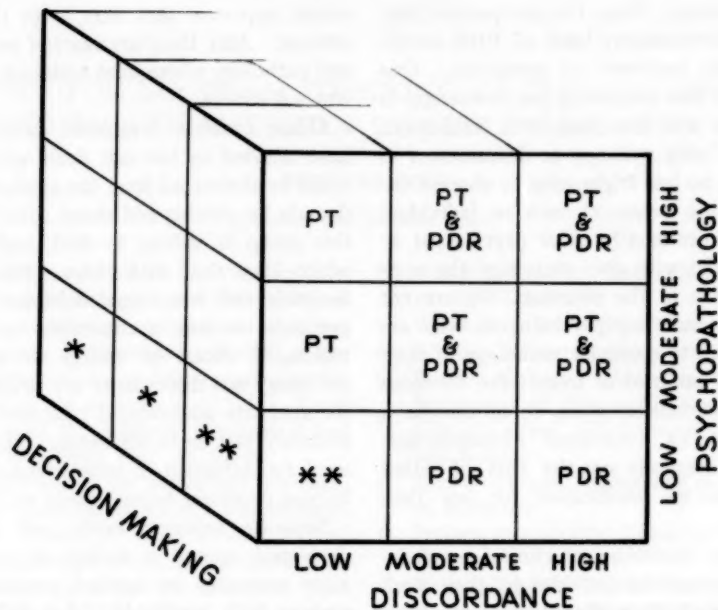


FIG. 1. A multivariate model of psychological treatment methodologies. Two asterisks indicate advisory services with minimal psychological involvement on the part of the client. One asterisk indicates relevant treatment methodologies for aiding the individual to resolve moderate or highly complex decisions. (The assumption in this representation is that this complexity can vary independently of affective involvement on the part of the individual.)

clusively to one or the other of these functions. Such independence might also justify highly specialized, minimally overlapping training programs oriented towards only one of these kinds of psychological treatment.

If, however, the dimensions of discordance and psychopathology are correlated, (as illustrated in Figure 2) as we would hypothesize, then the need for psychotherapy and PDR will covary, and combined treatment will generally be desirable. In this situation, it is harder to justify totally divergent training or treatment programs. The real meaning of the distinction between counseling psychology and clinical psychology seems to us to be a matter of emphasis on one or the other of these processes. It also seems clear to us that some extensive cross-fertilization is essential to the welfare of clients seeking help from practitioners of either specialty. We are convinced that all psychologists who attempt to offer personalized treatment services, inevitably will become involved in situations requiring both of the treatments we have tried to describe. Unfortunately, practitioners usually seek to identify themselves with one process by assiduously disclaiming the other, and thus

increase the likelihood of failure in the total job of psychological treatment.

Clinical psychologists have focused on behavior pathology and its treatment to such an extent that they rarely are able to conceive of personality in

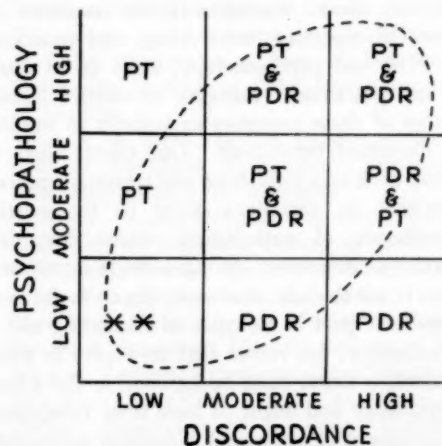


FIG. 2. The expected distribution of clients if psychopathology and discordance are correlated diagnostic categories. Two asterisks indicate advisory services with minimal psychological involvement on the part of the client.

nonpathological terms. From this perspective they are prone to indiscriminately label all PDR activities as inadvisable treatment of symptoms. One shudders to think how frequently psychotherapy is attempted as the sole treatment with individuals who complain of being unhappy or disinterested in their work. It is no less frightening to observe the nonpsychotherapeutic treatment such an individual receives from a vocationally naive psychiatrist or clinical psychologist *who does* recognize the nonpathological aspects of the situation. We are not forgetting those counseling psychologists who are unable or unwilling to recognize pathology in their clients. It is not unheard of to mistake delusions of grandeur for unrealistic goals, or to mistake a severe depression as vocational dissatisfaction. However, inept diagnosis on the part of either specialty provides no justification for less than adequate services.

Of course many counseling or clinical psychologists use the opportunities provided by their work to teach themselves skills in the alternate specialty. Some actually undergo a kind of professional metamorphosis, and are transformed completely into the alternate role. This kind of muddle might be avoided by training programs which recognize that many treatment processes are likely to be required in a sound program of psychological assistance for any particular individual seeking help. We have tried to describe and distinguish two of these treatment areas, and are convinced that there are few cases calling for either PDR or psychotherapy alone. Furthermore, our combined experience in observing, supervising, and practicing both PDR and psychotherapy, leads us to doubt that any practitioner manages to restrict himself to either of these processes exclusively in working with distressed individuals. Our clients force us to move back and forth from one treatment process to another as variations occur in the relative predominance of pathological versus discordant factors, sometimes even during a single interview.

This is not to claim that every psychologist must become an expert in all types of counseling and in psychotherapy, but rather that an expert in either field needs a sound basic background in the science of psychology and ought to have some competence in alternate diagnostic and treatment methodologies. Referral to a specialist in a complementary field will always be sound practice whenever it be-

comes apparent that this is in the client's best interest. Also, there are cases of severe discordance and pathology where joint treatment by two specialists is desirable.

Other common treatment processes which we have alluded to but not dealt with in this paper could be abstracted from the applied psychologist's domain by viewing additional situations with which this group is willing to deal, and the means by which they deal with them. For instance, it is desirable and encouraged behavior for high school graduates to seek a counseling psychologist when making a choice of college or career. Neither pathology nor discordance are necessarily involved. An alternate goal-related treatment method would probably best serve his needs. This illustrates the need for definition of other common psychological helping processes beyond those we have described.

Separate research needs and traditions have developed around a variety of specialized treatment processes in applied psychology. This is perhaps both inevitable and desirable, but it must not mislead us into believing that any given individual seeking psychological help can be understood fully from any one of these standpoints alone, or that he can be given adequate assistance without considering many of these aspects of his behavior. We have tried to explicate two such aspects of psychological distress and treatment. In the language of our title, we have come to see psychotherapy and at least one type of counseling, psychological discordance reduction, as Siamese twins. These processes are two distinct but closely related entities that share some vital concerns. Perhaps one or both of these twins have split personalities, but the distinction between them is not delusional.

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INTERNSHIPS FOR DOCTORAL TRAINING IN CLINICAL PSYCHOLOGY APPROVED BY THE AMERICAN PSYCHOLOGICAL ASSOCIATION

SHERMAN ROSS

Education and Training Board

ON the recommendation of the Committee on Evaluation, the Education and Training Board with the concurrence of the Board of Directors of the American Psychological Association has approved for doctoral training in clinical psychology the internships offered by the agencies listed below. These training agencies meet the minimum standards stated in the *American Psychologist*, 1958, 13, 59-60.

A revised formulation of the predoctoral internship in clinical and in counseling psychology was produced by the Ad Hoc Committee on Practicum Agency Evaluation of the Education and Training Board. This report is available on request and describes three types of internships: G, S, and U. The listing which follows indicates the first two of these types. The Type G internship provides relatively broad training and experience with a wide variety of patients. Type S provides intensive and varied experience, but with relatively restricted clinical material. The Type U internship consists of two subclasses: the so-called captive agency limiting its resources to students from a single university, and a group of agencies offering an organized pattern of rotations coordinated with a university training program. Each of the agencies listed has met the same qualitative standards with respect to adequacy of training. The present list reflects only the first phase of the re-evaluation of internship programs. The Committee on Evaluation is currently reviewing a large number of additional agencies. The list is alphabetical by states and agencies.

- G California, San Francisco: **Langley Porter Neuropsychiatric Institute**, Department of Psychiatry, University of California School of Medicine
- G California, Norwalk: **Metropolitan State Hospital**
- G California, San Francisco: **Mount Zion Psychiatric Center**
- G California, Imola: **Napa State Hospital**
- S California, Los Angeles: **Reiss-Davis Clinic for Child Guidance**
- G Colorado, Denver: **University of Colorado School of Medicine**, Division of Psychology
- G Connecticut, Hartford: **Institute of Living**
- G Connecticut, Middletown: **Connecticut Valley Hospital**

- S Washington, D. C.: **Child Center, Catholic University of America**
- G Washington, D. C.: **St. Elizabeths Hospital**
- G Illinois, Chicago: **Institute for Juvenile Research**
- G Illinois, Chicago: **Neuropsychiatric Institute, University of Illinois Medical School**
- G Illinois, Chicago: **Northwestern University Medical School**
- G Illinois, Chicago: **University of Chicago, School of Medicine**
- G Indiana, Indianapolis: **Larue D. Carter Memorial Hospital**
- G Kansas, Topeka: **Topeka State Hospital**
- S Kansas, Wichita: **Wichita Guidance Center**
- G Kentucky, Louisville: **Department of Psychiatry and Mental Health, University of Louisville School of Medicine**
- G Maryland, Baltimore: **Psychiatric Institute, University of Maryland**
- S Massachusetts, Boston: **Department of Psychiatry, Children's Hospital Medical Center**
- G Massachusetts, Worcester: **Worcester State Hospital**
- S Massachusetts, Worcester: **Worcester Youth Guidance Center**
- G Michigan, Detroit: **Lafayette Clinic**
- S Missouri, St. Louis: **Community Child Guidance & Child Evaluation Clinics of Washington University**, Division of Child Psychiatry, School of Medicine
- G Missouri, St. Louis: **Medical Psychology, Department of Psychiatry & Neurology, Washington University School of Medicine**
- G Nebraska, Omaha: **Nebraska Psychiatric Institute, University of Nebraska College of Medicine**
- G New Jersey, Trenton: **New Jersey State Department of Institutions and Agencies**
- G New York, Bronx: **Bronx Municipal Hospital Center & the Albert Einstein College of Medicine of Yeshiva University**, Jacobi Hospital
- G New York, New York: **Division of Clinical Psychology, Department of Psychiatry, Columbia-Presbyterian Medical Center**
- S New York, New York: **Department of Physical Medicine and Rehabilitation, New York University**

- S New York, New York: **Institute for the Crippled and Disabled**
- G New York, New York: **St. Vincent's Hospital of the City of New York**
- G North Carolina, Durham: **Duke University Medical Center and the Durham Child Guidance Clinic**
- G North Carolina, Chapel Hill: **North Carolina Memorial Hospital, University of North Carolina**
- G Oregon, Portland: **Department of Medical Psychology, University of Oregon Medical School**
- S Pennsylvania, Devon: **Devereux Foundation, Institute for Research and Training**
- S Pennsylvania, Pittsburgh: **Pittsburgh Child Guidance Center**
- S Rhode Island, Riverside: **Emma Pendleton Bradley Hospital**
- G Tennessee, Memphis: **Gailor Psychiatric Hospital, School of Medicine, University of Tennessee**
- G Texas, Houston: **Department of Psychiatry, Baylor University College of Medicine**
- G Texas, Dallas: **Division of Psychology, Department of Psychiatry, University of Texas, Southwestern Medical School**
- G Texas, Galveston: **Psychology Department, University of Texas Medical Branch**
- G Utah, Salt Lake City: **Division of Psychology, Department of Psychiatry, Medical College, University of Utah**
- G ARMY, Office of the Surgeon General, California, San Francisco: **Letterman Army Hospital**
- G ARMY, Office of the Surgeon General, Washington, D. C.: **Walter Reed Medical Center**

Comment

The Composition of State Certification Boards¹

Although certification legislation has been largely the program of clinical psychologists, other practitioners—and particularly industrial psychologists—have become increasingly interested and involved in the problem.

That industrial psychologists have not participated in certification or licensing until recently, in comparison with clinicians, is not surprising. The number of psychologists employed in industry was, until the post-war period, very small. Three decades ago there were barely two dozen full-time psychologists in industry. The growth of industrial psychology is primarily a post-World-War-II phenomenon. As industrial psychology grew, certification was proceeding apace, but the laws that were passed did not take into account some of the peculiarities of industrial practice. Not until 1957, for example, when Maryland in its new law and Connecticut in its revision, provided for the "itinerant" psychologist, did certification legislation give recognition to the interstate travel and practice characteristic of much of the consulting business. The proposed Illinois bill (Section 5e) does so by permitting practice by a nonresident without Illinois State certification for 30 days in any year, but only if the nonresident is certified or licensed elsewhere.

In spite of this history, however, industrial—and other—psychologists have already attained a significant and somewhat proportionate degree of representation in the administration of such legislation.

To measure this participation, an analysis was made of the membership of existing certification and licensing boards.

The December 1961 issue of the *American Psychologist* lists the membership, for 1961-62, of 19 nonstatutory and 18 statutory boards. In all, these boards had a total membership of 197, divided almost exactly in half: 98 served on the statutory boards, 99 on the nonstatutory boards (APA, 1961b).

The 197 board members were looked up in the 1961 *Directory* and classified by field of work and by APA divisional membership (APA, 1961a).

The "field of work" dimension is reported in Table 1.

Psychologists—at least these 197—are all busy people. Most of them are multiple jobholders, which complicated the classification problem. When in doubt, classification was arbitrary.

Roughly, however, they were distributed as follows:

¹ Based upon remarks before the Illinois Psychological Association, March 16, 1962, at Springfield, Illinois.

Clinical—full-time clinical employment, either in private practice or in an institutional or other setting. 70, or 35.5%

Clinical-academic—hold an academic appointment and also in private practice or in a clinical service setting. 25, or 12.7%

Academic—no other employment indicated. Includes teachers of clinical or industrial, or anything else. 58, or 29.4%

Industrial—full-time employment in industry. 4, or 2.0%

Industrial-consulting—in private practice or a member or employee of a consulting firm. 13, or 6.6%

All others—a large proportion of whom are in vocational or educational counselling, or in research organizations. 19, or 9.6%

The remaining eight board members were not members of APA and therefore not classifiable from this source. It is worth noting, however, that, if the estimate that there are as many practicing psychologists outside APA as there are in it is correct, non-APA psychologists are not participating on these boards in any relation to their true numbers.

Of the APA psychologists, it is clear that clinicians are well represented but not as overwhelmingly as might have been anticipated. If the practitioners were combined with the academic-clinicians, they account for just under half the group.

The picture described by divisional membership is somewhat similar. The relevant distribution is reported in Table 2. Since no significant differences were found as between statutory and nonstatutory boards, they were combined.

First, the 189 APA-member board members have a much higher frequency of divisional membership than

TABLE 1
DISTRIBUTION OF BOARD MEMBERS BY TYPE OF CERTIFICATION IN STATE AND BY FIELD OF WORK

Field	Statutory Certification Status	Nonstatutory Certification Status	Totals
Clinical	34	36	70
Academic-Clinical	10	15	25
Academic	29	29	58
Industrial	2	2	4
Industrial-Consulting	7	6	13
Counseling and Other	10	9	19
Not in APA Directory	6	2	8
Totals	98	99	197

TABLE 2
DISTRIBUTION OF BOARD MEMBERS BY FIELD AND BY DIVISIONAL AFFILIATIONS

Division	Clinical	Academic-Clinical	Academic	Industrial (including consultants)	Other	Total		APA Total	
						N	%	N	%
1			5		1	6	3.1	634	3.3
2	1	4	16		3	24	12.5	641	3.4
3			15	1		16	8.3	836	4.4
5	1		6	2	2	12	6.2	651	3.4
7	6	3	4	1	1	15	7.8	632	3.3
8	7	4	7	1		19	9.9	1,059	8.0
9	4	1	4			9	4.7	850	4.5
10		1	1			2	1.0	126	0.7
12	57	21	14	4	2	98	51.0	2,466	13.0
13	6		3		1	10	5.2	231	1.2
14			4	12	5	21	10.9	756	4.0
15	1	1	6	1	1	10	5.2	567	3.0
16	2		4		4	10	5.2	752	4.0
17	9	2	10	2	7	30	15.6	1,049	5.5
18	9			1	1	11	5.7	267	1.4
19		2	2	1	1	6	3.1	290	1.5
20		1	1			1	0.5	238	1.3
21		2	2			2	1.0	298	1.6
22	4	1	1		1	6	3.1	749	4.0
Not in Division	9	7	7	3	2	23	12.0	?	
Total Divisional Memberships	108	39	105	26	30	308		13,542	
Total APA Members	70	25	58	17	19	189		18,948	
Divisions per Member	1.54	1.56	1.81	1.53	1.58	1.63		0.71	
Not in APA						8			

is true for APA generally. Twelve percent (23 people) of the board members belonged to no division. The ratio for APA is about 60%. The 189 APA board members held 308 divisional memberships—1.6 per individual. For APA, the average is 0.7. Academicians on boards are more frequent joiners than nonacademicians: 1.8 divisions to 1.5 divisions.

Since multiple membership is common, comparisons on the basis of divisional affiliation may be misleading. For example, psychologists of all persuasions belong to Division 12—among them, four of the 26 are industrial psychologists. Taking this into consideration, however, the five divisions represented by 10% or more of the board members are as follows:

12, Clinical; 17, Counseling; 2, Teaching of Psychology; 14, Industrial and Business; 8, Personality and Social Psychology.

For the remaining Divisions, the percentage of board membership is very close to the percentage of APA membership.

These data suggest that while industrial psychologists (and other nonclinicians) have played only a secondary role so far in the area of certification, they may not have lagged too far behind in proportionate participa-

tion in the administration of certification and licensing programs.

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Some Comments on Psychology and Psychophysics

Historically the development of psychophysical procedures was instrumental in fostering the growth of psychology and its emergence as a discipline separate from philosophy. At the present time, while psychophysical studies are still performed extensively, there has been a diminution of interest in them among psychologists and a misunderstanding of them among some other disciplines.

At a time when specialization within psychology is so prevalent, it is not surprising that those not directly concerned with psychophysics should concentrate on other subfields within psychology. Among some of us involved in psychophysical research it is disturbing to watch this field being abandoned by the majority of experimental psychologists as an area more closely aligned to physics than to psychology. It is equally disturbing to contemplate the fate of sensory psychology if it were abandoned to physicists, many of whom are unaware of and unconcerned with the psychological implications inherent in psychophysics.

The following brief discussion describes some of the problems faced by the psychologist engaged in psychophysical research. This discussion is not intended to be an exhaustive account of interdisciplinary difficulties; instead, it is simply a statement of how one psychologist views some of the problems within his field of special interest.

Two major areas of difficulty are apparent. The first is the trend away from a psychological framework for psychophysics and the second is ignorance about sensory psychology and the methods it uses.

There are two closely related points which have encouraged a physical rather than psychological framework for psychophysics. The first is reductionism and the second is acceptance of only physical reality. A presently accepted practice in much of the scientific world is to seek "basic" explanations for observed phenomena. Interpretations of results seem to have more appeal if they are cast in physical, chemical, or atomic terms rather than something as gross as psychological terms. While relationships between the psychological and other more molecular fields are interesting and often informative, such a reductionism implies that there is something wrong with an interpretation if it is merely a psychological one.

Closely related to the issue of reductionism is the insistence on physical reality. This view accepts as real only those findings which are based upon physical measurement and which are expressed in physical units, but questions the reality of psychological findings expressed in psychological units.

No doubt one of the factors responsible for this belief is the emphasis placed on stimulus control. The necessity of describing and measuring the stimulus introduces rather imposing and elaborate physical equipment. In psychophysical research a great deal of time is spent calibrating instruments and making extremely precise and careful measurements. To some people involved in research in this area, all the data necessary may be obtained with carefully calibrated

physical instruments and the introduction of a human receptor into the system is unnecessary, particularly since this practice leads to what they consider to be spurious results.

There can be no doubt that an extensive knowledge of physics is an essential. It is with the benefit of such knowledge and with the assurance that his equipment is sensitive and is carefully calibrated, that the psychologist must begin. The psychologist must be concerned not only with the adequacy of his physical equipment, but he must also be assured of the stability of his observer. Consequently, much time and effort must be spent training the observer. The observer in this situation is not a static component of the system but rather is a most important link. The final data can only be as reliable as the stability of the observer's criterion. From the standpoint of one interested in receptor processes, then, there can be no data at all without the human receptor introduced into the system.

Another factor which is responsible for ascribing psychophysics to the physicist and which promotes ignorance of psychophysical research among some psychologists is the publication policy of many of the psychological journals. Most of the journals which publish experimental research in psychology are understandably concerned about the degree of specialization of the article. For this reason, editorial policy has generally been opposed to the publication of psychophysical research unless such research bears on some more general issue of experimental psychology. Much psychophysical research has therefore been reported in journals which publish extensive physical and physiological research.

Some ignorance of psychophysics among psychologists may be traced to their undergraduate and graduate training. Opinion of contemporary psychology is formed to a great extent by the attitudes of instructors both in graduate and undergraduate courses of psychology. There appears to be an increasing tendency among such instructors either to eliminate discussion of psychophysics or grudgingly to cover only the barest superficialities in their historical introductions.

Unfortunately, I can propose no real solution for this regrettable state of affairs. Perhaps as a first step, instruction in psychophysics could be reinstated in introductory psychology courses and in experimental psychology laboratories.

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Controversial

The increased concern that psychologists have for professional problems is a logical and necessary trend as greater numbers deal in direct services to the public. It may be considered as a necessary evil or a valuable step, but it is clearly an area that demands our attention.

In our concern with these matters some psychologists feel that existing organizations are adequate, some suggest changes within the organizations (such as a revision of the Constitution of Division 13), and others feel a necessity for new organizations. The group known as Psychologists in Private Practice appears to be this kind of new organization. I do not deny the validity of the arguments for the existence of such groups, but I am alarmed at some of the apparently nonprofessional and unprincipled aspects that seem to have become a part of this organization. This letter deals principally with the February 1962 *Newsletter* which I assume to be the representative publication of PPP.

The PPP *Newsletter* discloses that psi-shaped lapel pins in solid gold are being offered. One wonders if this will lead to a special plate for automobiles so that a psychologist could be recognized by police officers who could then commandeer their services for psychological emergencies. Might this also lead to a secret hand-

shake? Should an organization advocate, as implied in "Rip and Send," the malicious tearing out of pages from telephone directories? What is the intended implication of a short paragraph entitled "Big Business" that points out the \$1,000,000 budget of APA and states that more than half of it goes into publications? If PPP is critical of the way in which APA utilizes its funds, couldn't this be clearly stated and shouldn't organized ways for effecting change be utilized?

Should a division of APA lower its barriers by having persons who do not know candidates endorse their applications as suggested by PPP? In order to make up for the possible negative effects of this practice, PPP advocates writing to them about persons who may be unethical. Certainly unethical practices should be reported, but is this the way to build a responsible organization?

The needs of psychologists in private practice should certainly be represented by a professional organization. Whether or not a new or separate organization should be established is a controversial issue. However, a responsible psychologist in private practice may feel the need for PPP, but find it unacceptable to identify with an organization that moves in the direction indicated by the PPP *Newsletter*.

STANLEY SPIEGEL
Portsmouth, Virginia

Psychology in Action

OBTAINING SUBJECTS FOR RESEARCH¹

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THE writer recently began doing contract research in social psychology in an organization where no captive subjects are available. Consequently, it was necessary to seek unique solutions to the perennial subject problem. These attempts have been successful and have aroused some interest on the part of others. Listed below are five sources of subjects which have produced ample data.

UNITED STATES EMPLOYMENT SERVICE

The United States Employment Service offices throughout the United States have a large continuous number of individuals entering their offices. Although we had anticipated difficulty with these subjects in filling out questionnaires developed for use with students, we have been surprised at their general literacy, and have had no more difficulty using such instruments as the semantic differential than we have experienced with students. The employment service has been willing to select subjects for us on any variables we specify, such as age, sex, type of occupation, etc. An interviewer obtains subjects and delivers them to a room assigned to us. Subjects are always ready and waiting when we finish with a group, and we have completed a large study without the loss of a single hour or subject in two days.

The cooperation of the United States Employment Service was obtained by explaining the objectives of the research being performed, and stressing its potential value in terms of its application to national goals. It was pointed out that our military sponsor would be grateful for any cooperation received and would be informed of the help received from the United States Employment Service.

It was agreed that the subjects be paid \$1.25 an hour. This allowed the employment service to offer the unemployed something to keep them busy, and let them earn some pocket money while waiting for job leads. It might have been possible to obtain

some subjects without payment, but payment insured a constant supply of subjects standing by. The employment service did not charge us for the use of their space or the interviewer. The subjects are paid in cash immediately upon completion of a session.

One of the advantages of this subject pool has been the motivation of the subjects, who are more amenable to experimental procedures than are students. They do not anticipate or attempt to deduce the "real" independent variable as overexposed student subjects frequently do. Another advantage is their availability for extended periods of time. It was possible to maintain experimental control at university laboratory levels.

MILITARY RESERVE UNITS³

There are a large number of military centers where men meet in the evening and on Sundays to drill and attend classes. These men are good subjects and quite cooperative. About 100 can be obtained at one center.

The writer has approached five reserve centers and obtained subjects at four of them. One center refused because of insufficient time to cover training objectives, but referred us to another source of military subjects where it was possible to obtain men. In no case did a reserve center require us to go through official channels. The motivations for cooperation seemed to be related to their feelings that they were on the periphery of their military organization, and that we were putting them into contact with the main stream of activity in their service. The purposes of the research were explained in applied terms, and it was pointed out that they would be furthering the mission of their service which would be acknowledged in official communications and reports.

The advantages of this population are the ease of generalization to military situations on military contracts, the large number of men available, and the advantages of knowing rank structure and of being able to manage subjects easily once approval has been obtained at a higher level.

Disadvantages are the poor control caused by the desire of some officers to observe and even participate in experiments, varying group sizes, and the heterogeneity of the civilian occupations of the subjects.

³ This population was suggested by Harold E. Price.

¹ This paper was written at the suggestion of Charles E. Hutchinson and H. J. Sander of the Behavioral Sciences Division, The Air Force Office of Scientific Research of the Office of Aerospace Research, the sponsoring agency for a large portion of the research referred to under Contract No. AF 49(638)-1000.

² Now at Serendipity Associates, Los Angeles.

Although the number available is quite large when the number of centers is considered, the number available at any one center is limited. Considerable variation was found between reserve centers in the cooperativeness of the officers toward the research program.

OPERATIONAL MILITARY UNITS

Despite the apparent number of military subjects, surprisingly few bases have enough men available to satisfy research requirements. Generally it is necessary to go to a large training base in order to obtain sufficient men. Where there are large numbers of men undergoing training we have been able to obtain subjects, but have had to go through channels. This proved to be a time-consuming operation with the Army, taking about 60 days, but to date has been very rapid for the Air Force.

In addition to recruits undergoing training, operational units can sometimes be found to fit a particular research need. For example, in order to study isolation stress we have obtained the approval of the Air Defense Command to use radar stations. These stations are almost ideal for this purpose, as they have very similar tasks, ranks, and social structure, and are in every conceivable location, including metropolitan areas, the Arctic, mountain tops, remote islands, and deserts.

In general, cooperation is best obtained from the military by indicating the work is being done on a military contract, by pointing out the value of the research in terms of its eventual applications, by promising to use mature, experienced personnel who will keep interference to a minimum, and by giving credit for the help received in official communications.

The advantages of these military subjects compared to students are a greater naiveté regarding research, better motivation, availability for longer periods of time, and, in the case of research in social psychology, the fact that they constitute established groups.

PRISONS

A large prison system has agreed to let us use prisoners for subjects. This prison system has a research function headed by a psychologist who is attempting to produce a research atmosphere and program in the prisons. He was extremely positive toward our request to do research on prisoners. We agreed to pay subjects their regular rate, thus simplifying the administration problem, as prisoners earn only a few cents an hour.

The advantages of the prisoner population are the almost unlimited time the subjects have available, which permit the use of the longer periods of subject interaction, so badly needed in small group research, plus the use of longer personality inventories.

The disadvantages with these subjects are the gen-

erally lower intelligence level and the fact that they are obviously not representative of the general population.

FIRE DEPARTMENTS⁴

City fire departments have large numbers of men on duty with little to do for hours at a time, whom we have found to be very cooperative subjects.

Obtaining permission from the fire department was relatively simple, and was accomplished by explaining the importance of the research for the achievement of national goals, discovering parallels between the research goals of our contract and problems for which the fire department is seeking solution, and by supplying the fire department with copies of our reports and making verbal presentations to their administrative personnel of possible applications of the research to their department.

The chief advantage of this population is the large number of hours the subjects have available and are willing to spend filling out personality inventories and questionnaires, working on group tasks, etc. They have the additional advantage, for social psychological research, of being available in real groups who know each other very well. These men have observed each other in a wide variety of situations, from eating and sleeping communally to dangerous and emergency situations. We have been able to obtain large quantities of sociometric and other types of personal data with no difficulty or need to use coding systems.

CONCLUSIONS

The research subject problem can be solved by obtaining the help of organizations other than universities, several examples of which have been described. The cooperation of these organizations can best be obtained by establishing a rapport based on an understanding of their needs, rather than by demanding cooperation as the right of the scientist. We often, as scientists, act as if we believe that our problems and objectives are more important than those of other institutions in our society, and that other organizations, therefore, should be willing to devote their resources to solving our problems. This philosophy, though seldom verbalized, is frequently communicated and results in our exclusion from many situations.

On the other hand, it is usually possible to establish a symbiotic relationship with nonscientific organizations, in which we, as scientists, can help them satisfy some of their needs (status, data on an applied problem, etc.). In fact, our experience has been that adequate controls can be achieved in field situations, but only when we are operating in the field situation on a mutual need satisfaction basis, and not on an "everyone should help science" plea.

⁴ This population was suggested by Joseph W. Wulfeck.

Psychology in the States

Global Strategy

A map of the world that does not include Utopia is not worth even glancing at, for it leaves out the one country at which Humanity is always landing.

Oscar Wilde said it, and we were moved to dig out his dimly remembered words on two counts. One is the cover of a recent Oregon Psychological Association newsletter which, like the world maps the old Romans built around the Mediterranean (and the new Texans around Austin), shows Portland as the hub and APA next to the White House. Doubtless the Oregon cartographer intended neither as the Utopia. But his sketch reminded us that the world of psychology, as seen through the newsletters, leaflets, and brochures which pass over our desk, is an expanding one whose center of gravity shifts and may, indeed, be most anywhere at the moment.

We shall not dwell on the latest publication bearing the APA imprint—*Some Views on Soviet Psychology*; that will easily get its share of notice. There is enough else to speak of in a simple sample of the panorama of interests which moves psychologists here and there to do this and that about one thing and another.

Continental and Transcontinental. We never suppress the urge to look across the border, but we may repress it. The fact is that when we do note the efforts of our Canadian colleagues, they are invariably superb. Most recently, there has come to us *A Brief from the Canadian Psychological Association Submitted to the Royal Commission on Health Services*. It begins:

The Canadian Psychological Association has noted with considerable satisfaction the broad approach to health in Canada reflected in the terms of reference of the Royal Commission on Health Services. This Association finds itself in full agreement with the World Health Organization which has adopted a concept of health which refers to "a state of physical, mental, and social well-being, not merely the absence of disease or infirmity."

In a Preamble, the Brief has occasion to state the objectives of the Canadian Psychological Association which turn out to look like just what the doctor ordered to keep peace in the family:

To promote, by discussion and research and the dissemination of information, the advancement and practical application of psychological studies in Canada; to issue such publications as may from time to time be considered necessary and feasible; to render such assistance as it properly can to governments and other organizations concerned with education, health, administration of justice, industry, National Defence and other social and national problems; to do and conduct such activities as may be considered necessary to forward the objectives of the Association. . . .

Be that as it may, the Summary of Recommendations with which the Brief begins is reminiscent of our own Joint Commission on Mental Illness and Health. CPA has much to say and on many fronts—research, service, and training among them. About research, for example:

1. It is essential that available funds for sponsoring psychological research in Canada keep step with the rapid advances in quality and quantity of research being undertaken by Canadian psychologists. . . .

2. The researcher should be allowed as much scientific freedom as possible. . . . If, in the course of his work, he finds promising leads that he believes will be more productive than those outlined in his original proposal, he should be free to follow them. . . .

3. Financial provisions should be made for researchers of established competence to undertake relatively large-scale, long-term research programs.

4. The position of psychologist-researcher should be firmly established in academic, service, and research settings. This involves provision for professional status and financial remuneration which compares favourably with the status of service and teaching personnel with comparable training in these settings. It also involves administrative support and encouragement of psychological research in academic and service settings.

5. Granting bodies should take care to avoid too narrow a definition of what is to be considered health or mental health research. Important contributions have been made by psychologists working on applied problems in the health area; significant developments have also come from psychologists whose primary interest is in basic research on human and animal behaviour. Both applied and basic psychological research merit public support.

6. Control of the administration of research grants should be shared by individuals who have themselves established research competence. . . .

7. Grant awarding agencies should maintain a reasonable balance between, and a clear distinction between, grants for research and grants for service. Research funds should not be used to provide services, no matter how essential the services may be.

The report has equally cogent thoughts on service—about the need for its improvement, the importance of prevention and rehabilitation, the interdisciplinary approach, and the manpower problem. And it minces no words in the area of training. To wit:

Most essential is the need for fully qualified Ph.D. psychologists, capable of undertaking supervision and leadership of subdoctoral psychologists in service settings. . . . Since we do not yet know what is the "best" way to prepare a psychologist for mental health service, we must continue to work from the broad base of psychological science and allow considerable flexibility and variation in the training of workers for the field.

Down to Earth Too. Lest all of these pronouncements sound far out, the Ontario Psychological Association comes home to roost with a roster which bids fair to translate theory into practice. Entitled *Roster of Speakers and Resource Persons on Psychological Topics*, the OPA opus is (with apologies to our compatriots) the best of its kind we have seen. If not the best, at least the most systematic.

The Roster:

. . . represents an effort by the Public Relations Committee of the Ontario Psychological Association to meet the growing need of the public for more information on psychology and psychologists. It is dedicated especially to representatives of the various communications media, such as responsible journalists, reporters, programme directors and newscasters of radio and TV stations and networks, organizers of panel discussions, leaders of community groups and organizations.

Ingenious as the format is, the Roster makes finding the right psychologist for the right job not quite as easy as hitting the side of that barn—but almost. One can zero in on knowledgeability from several sectors—by name, geography, or area of interest. The school superintendent of Peterborough, looking for someone in his community to chair a panel on emotional disorders in children finds Watson is his man. Or if this sounds too Holmesian (which it is not, since Watson is actually so listed), then he will like to know that Penfold is nearby, willing to talk about forensic psychology to professional groups and available for interviews by the press as well. In short, the Roster triangulates its resource person by where he lives, what he knows, and which communication medium he prefers.

Those interested in clinical subject matter can readily track down a speaker on marriage counseling, alcoholism, aging, personality theory, or psycho-

therapy. Speakers more conversant with child psychology in particular are to be had on the subjects of mental retardation, giftedness, the problems of adolescents, parent-child relations, or even the pros and cons of camping and scouting. Industrial psychologists there are too—to speak about human relations in industry, personnel selection, or motivation and marketing research. The social psychologists in the lot are prepared to discuss the integration of Canadian immigrants, the psychology of groups, or the dynamics of prejudice. And in the area of "Other Psychological Subjects" there are OPA members ready and able to speak on military psychology, the philosophy of science, physiological psychology, and research design.

In presenting its 74 "willing and competent" speakers and resource persons, the OPA Public Relations Committee, under Harry C. Hutchison and Editor Stephen Neiger, reminds those for whom the Roster is intended:

As in other fields of scientific endeavour, so in psychology, the public has a right to the most up-to-date and most precise information. This aim can be served by distinguishing clearly between theories and findings, and by outlining the applicability and the limitations of findings. In this task the responsibility is shared by the psychologist and the journalist (or panel moderator).

And Abroad. At this time, when Comrades Popovich and Nikolayev are hard on each others' heels up there, and psychologists of all nations are visiting each other down here, the XVII International Congress of Psychology is drawing on its own lead time to round out preparations for its 1963 Congress in Washington, D. C.

The beneficence of government agencies and professional societies will help bring over the senior foreign psychologists for the occasion. Their younger, less well-known, but highly promising colleagues may find attendance costly, perhaps impossible. Here enters the Young Psychologists Committee of the Congress, hoping financial support from APA Divisions, regional associations, and, yes, state psychological associations may solve problems of transportation and living expenses.

Already a number of state associations have raised or pledged monies; others are at work on the problem. Some are appealing to the individual members, others donating funds from the treasury. By the time this column appears, members of the Young Psychologists Committee will have visited various workshops and symposia during the APA

convention to make a personal appeal for support of the venture. This column will take pleasure in reporting its status periodically during the coming season.

* * *

Clinical Clearing House. Here at home life goes on too. And without getting clinical about its meaning, one can note a recent brochure of the Division of Clinical Psychology of the New York State Psychological Association devoted exclusively to reporting the research activities of members on the basis of 159 questionnaires returned. Reported by problem area and subject population, the research studies are a formidable lot. The topics one has come to associate with clinical psychology are there, including such avantgarde efforts as the "mea culpa syndrome." But so are many which reflect the whole spectrum of psychological interest: psychophysical investigation of ability to rate clinical and experimental pain intensities; prediction of reading ability by psychomotor tests; psychological effects of thyroid deficiency; scapegoats in caricature; personality dynamics in relation to disaster; delay in acquisition of spoken language; cerebral dysrhythmia in juvenile delinquency.

By their research ye shall know them, and this group of clinical psychologists can hardly be accused of being afraid to come out from behind clinical jargon to fight like a man. The venture looks like NYSPA's answer to the Bio-Sciences Information Exchange. If breadth of interest bespeaks the health of a science, and if these clinicians are not the exception, the prospectus helps reassure one psychology is not fissioning when it should be fusing.

* * *

A Career in Psychology. Our field being the protean affair it is, as the above attests, it can be caught only in stroboscopic shots, even then seems to have moved while the shutter clicked. The pamphlets and brochures of just a few years ago sound already like the old edition. Happily, a new one is on its way. It promises to reflect the best consensus science and profession can muster at this point in time.

With support from a grant of the National Science Foundation and the pen of Sherman Ross, Executive

Secretary of the Education and Training Board, the draft of a new career brochure has taken shape. It is right now being submitted to the critical scrutiny of each APA Division, the better to achieve the final version with which all can live happily. Not ever after; only till there is again a significant difference between the psychology of today and tomorrow, at which time other historians will write other things about the same field.

* * *

Never Say Die. While this column has been wont to take cognizance of the efforts of the Goliaths of state associationdom, our sympathies have secretly lain with the Davids. When Utah with its 89 psychologists tells of its latest coup, we listen. The more so since its Professional Relations Committee, composed of psychiatrists, social workers, psychiatric nurses, and psychologists, has achieved the rapprochement others still talk about.

We resist an allusion to the olive branch, though as symbolism would have it, it happened to be C. D. Hardin Branch, a president of the American Psychiatric Association, who underwrote the expenses for this one out of a grant for providing mental health training to general practitioners. The workshop, held at the University of Utah, brought an interdisciplinary team from the Suicide Prevention Center of Los Angeles to Salt Lake City for the occasion, APA member Norman L. Farberow among them.

Thrift, careful planning, and a responsive audience of 250, Professional Relations Committee Chairman Robert J. Howell reports, combined to defray expenses and yielded enough extra to prepay next year's meeting to boot.

When we turn again to Mr. Wilde, he reminds us:

If you wish to understand others, you must intensify your own individualism.

And when we turn again to Utah, it reminds us that the age of the pioneer is still, happily, with us.

—ELIOT H. RODNICK

Chairman

Board of Professional Affairs

ERASMUS L. HOCH

Administrative Officer

State and Professional Affairs

Notes and News

Correction. The names of Francis H. Palmer, Henry W. Riecken, and Nonna Shapan as visitors in 1961 to the Psychometrical Laboratory of the Polish Academy of Sciences, Warsaw, were inadvertently omitted from an earlier Notes and News item (*Amer. Psychologist*, 1962, 17, 124).

The American Board of Examiners in Professional Psychology, Inc., conducted oral examinations for 131 candidates in New York, Boston, Chicago, and Los Angeles in the Spring of 1962. The total oral examination included a Professional Field Situation and the following three parts:

Diagnosis, appraisal, or evaluation (the definition of the problem faced by the professional psychologist)

Therapy, counseling, or constructive action (how to deal with the professional problem)

Ethical and professional attitudes and knowledge (the conditions of acceptable professional practice)

The Board wishes to express its appreciation to the following Diplomates who served as members of oral examining committees:

Leonard Abramson
Lewis E. Albright
Thelma Alper
Charlotte Altman
Dorothy Anderson
Kate Anderson
Marvin Aronson
Gertrude Baker
Robert W. Baker
Robert P. Barrell
Samuel J. Beck
Chester Bennett
Marianne Beran
Constance C. Berry
William C. Biel
Hedda Bolgar
Frank Boring
Norman T. Bowes
Roy Brener
Ruth L. Bromberg
Daniel Brower
James Bugental
Maurice O. Burke
Renata Calabresi
Jacob Cohen
Evelyn Crumpton
S. Thomas Cummings
Herdis Deabler
Gordon Derner
Austin DesLauriers

Andrew S. Dibner
Richard F. Docter
Seymour Epstein
Benjamin Fabrikant
Norman Farberow
Miriam Faries
Herman Feifel
Oliver Fowler
Samuel H. Friedman
Erika Fromm
Robert Geertsma
Harold Giedt
Harry Gilbert
John V. Gilmore
Fred Goldstein
David S. Goodenough
Harold Goodglass
Harry Grayson
Janet Greene
Zoltan Gross
David Grossman
Milton Gurvitz
Florence Halpern
Molly Harrower
A. Arthur Hartman
Louise Hewson
Rhea Hilkevitch
Eleanore Holzman
A. L. Hunsicker
Howard Hunt

Anthony R. Hybl
Wilma Inskip
Murray Kahane
David Kahn
Harold Klehr
Pearl Knapp
Frank Kobler
Mary S. Kunst
Theodore Jackson
Leota L. Janke
Tatania Juzak
Goldie Kaback
Elizabeth Kelly
Seymour Klebanoff
Melvin Kornreich
Philip E. Kubzansky
Alvin Lasko
Ernest S. Lawrence
James Lawrence
Bernard Locke
Herbert R. Lotz
Winifred B. Lucas
William Lundin
Robert L. McFarland
Karen Machover
Solomon Machover
Morse P. Manson
Stanley Marzolf
Robert C. Misch
Stanley Moldawsky
Henry Morgan
Robert Morrow
Allyn Munger
Martin Nass
Leonard B. Olinger
James O. Palmer
Morris J. Paulson
Samuel Pearlman
Melvin Perlman
Leslie Phillips
Bertram Pollens
Karl Pottharst
Joanne Powers
Ernst Prelinger
Sidney D. Prince
Roderick W. Pugh
Frances Racusen
Jesse Rhulman
Bernard Riess
Charles Rodell

Alexander C. Rosen
Alan K. Rosenwald
Floyd L. Ruch
Emanuel Schwartz
C. W. Scott
May Seagoe
Harold Seashore
Kalman Selig
Robert Selover
Georgene Seward
Laurance Shaffer
Eugene Shapiro
Stewart Shapiro
Joseph G. Sheehan
Lewis J. Sherman
Estelle Shugerman
Phil S. Shurrager
James S. Simkin
Jerome Singer
Vita Sommers
William F. Soskin
Fred Spaner
Marvin Spanner
George Speer
Marvin Spiegelman
Bernard Steinzor
Dorothy Stock
Murray S. Stopol
Edward Strongin
Joseph Stubbins
Eugene Talbot
Kenneth Teel
J. Warren Thiesen
Robert L. Thorndike
Dik W. Twedt
John M. Vayhinger
Leroy N. Vernon
Pauline Vorhaus
Sven F. Wahlroos
Robert Watson
Herman Weiss
Alexander G. Wesman
Marshall M. Wheeler
Barbara Wilbur
Harold Wilensky
Meyer Williams
Wilson Young
Bohan Zawadski
Irla Lee Zimmerman

Examining committees were chairmanned by present members of the Board of Trustees: Phillip A. Goodwin, John H. Gorsuch, Ralph W. Heine, Bill L. Kell, Noble H. Kelley, John W. Macmillan, Edwin S. Shneidman, and Albert S. Thompson;

and by former members of the Board of Trustees: Edward S. Bordin, Stanley G. Estes, Edwin R. Henry, Donald Marquis, Mortimer M. Meyer, Anne Roe, David Wechsler, Austin B. Wood, and George K. Yacorzynski.

The deaths of the following members have been reported:

Marjorie Black, June 21, 1962
 Henry Brant, 1961
 Carl L. Carlson, March 23, 1962
 Edwin M. Chamberlin, August 12, 1960
 Marjorie B. Cotton, December 18, 1961
 Erika F. Franz, August 19, 1961
 B. F. Haught, December 6, 1961
 Mary H. S. Hayes, 1962
 John Lesser, Jr., December 1961
 Lewis R. A. Lingley, May 13, 1962
 Harold McIlvaine, June 19, 1962
 Katharine Murdoch, July 5, 1962
 A. Lee Pitman, June 5, 1962
 Robert B. Porter, December 30, 1961
 Delmer V. Swander, April 17, 1962
 William A. Thomson, June 4, 1962
 Lyle Tussing, June 13, 1962
 Marjorie Van de Water, August 2, 1962
 Robert S. Woodworth, July 4, 1962
 Aubrey A. Zellner, 1962

Andrew A. Aines has been appointed Chief of the Research Support Division, United States Army Research Office, Arlington, Virginia.

Walter H. Clark, formerly at the Hartford Seminary Foundation, has accepted a post as Professor of Psychology of Religion at Andover Newton Theological School, Newton Centre, Massachusetts.

John J. Collins has recently been appointed to a newly created position of Human Factors Research Advisor to the Deputy Chief of Naval Operations (Development), Washington, D. C.

Douglas Y. Cornog, formerly with the Westinghouse Systems Division, Baltimore, Maryland, has joined the National Bureau of Standards, Washington, D. C., as Research Psychologist with the Research Information Center and Advisory Service on Information Processing.

Effective September 1962, George D. Demos, formerly at San Fernando Valley State College, Northridge, California, has accepted a position as Associate Dean, Counseling and Testing, and Associate Professor, Long Beach State College, Long Beach, California.

Charles Dicken, formerly in the Departments of Psychology and Psychiatry, University of Chicago, has accepted a position as Assistant Professor of Psychology at San Diego State College.

Herbert Dorken, formerly at the Range Mental Health Center, Virginia, Minnesota, has been appointed to the position of Deputy Director, Liaison and Prevention, Department of Mental Hygiene, Sacramento, California.

Ralph A. Enrick, formerly with Malcolm Bliss Mental Health Center and Washington University Medical School in St. Louis, Missouri, has been appointed Staff Psychologist at the Adams County Mental Health Center in Quincy, Illinois.

Marshall J. Farr, formerly with the Aviation Psychology Division of the Human Engineering Office, United States Naval Training Device Center, Port Washington, New York, has been appointed Head of the Mass Communication Branch, Communication Psychology Division at the same Human Engineering Office.

John B. Fink, formerly with the Federal Aviation Agency, Aeromedical Research Institute, in Oklahoma City, is now with the Stanford Research Institute at Menlo Park, California.

Curtis A. Gilgash, former Chairman of the Psychology Department at MacMurray College, has accepted a position as Professor of Psychology and Chairman of the Psychology Department at the University of Tampa.

Albert S. Glickman, formerly with the United States Naval Weapons Plant in Washington, D. C., has been appointed Chief of the Personnel Research Staff, Office of Personnel, Department of Agriculture, Washington, D. C.

Douglas Gold is now Chief Clinical-Counseling Psychologist at the Veterans Administration Center at Dublin, Georgia.

Clark L. Hosmer, formerly Commander of the Technical School at Lackland Air Force Base, has accepted an associate professorship in the School of Business, Florida State University, Tallahassee, Florida.

Jack G. Hutton, Jr., has joined the staff of the Counseling Center, Newark College of Engineering, Newark, New Jersey, as Counselor with the rank of Assistant Professor.

Woodbury Johnson, United States Navy, has accepted an interservice transfer and is currently serving as Lieutenant Colonel, Transportation Corps, United States Army, at Fort Rucker, Alabama.

Erwin Lesser, formerly with the Guidance Center of the University of Miami, is now in private practice in South Miami, Florida.

William M. Lesser, formerly clinical psychologist at the Connecticut Valley Hospital, has been appointed Chief Psychologist at the Psychiatric Clinic of the Charlotte Hungerford Hospital in Torrington, Connecticut.

Luther C. Long, formerly Director of the Psychological Services at Selinsgrove State School and Hospital, has been appointed Director of Psychological Services at the Danville State Hospital in Danville, Pennsylvania, and will continue as Consultant in Psychology at the Geisinger Medical Center in Danville.

Arthur C. MacKinney, Iowa State University, has joined the faculty at the University of California, Berkeley, as Visiting Associate Professor of Psychology for the fall semester, 1962-63.

John J. Morgenstern, formerly School Psychologist of the Glens Falls, New York, City School District, has been appointed School Psychologist with the Beverly Hills, California, Unified School District.

Charles S. Morrill, formerly Staff Psychologist at the MITRE Corporation, has joined the programmed instruction group at Bolt Beranek and Newman, Inc., Cambridge, Massachusetts.

Harold R. Musiker, formerly with Walter V. Clarke Associates, has been appointed Director of Psychology with the Rhode Island Hospital, and

is Special Lecturer in Psychology at the University of Rhode Island.

Alvin Orinstein is now Chief Psychologist of the Child Guidance Association, Irvington, New Jersey.

Harold C. Peters, formerly Chief Psychologist at the Dade County Juvenile Court Child Guidance Clinic, has accepted the position of Director of Psychological Services with Florida Business Research.

Bady Quintar is now Chief of Psychological Service at Henderson Clinic of Broward County, Inc., Fort Lauderdale, Florida.

Glen R. Rasmussen, formerly at the University of Michigan Flint College, has been appointed Professor of Education and Psychology, Edwardsville Campus, Southern Illinois University.

James M. Sakoda, formerly at the University of Connecticut, has accepted the position of Professor at Brown University in the Sociology Department.

Erna Schwerin, formerly at the Northwest Guidance Center, Lima, Ohio, will join the staff of the Jamaica, New York, Center for Psychotherapy on October 1, 1962.

Lloyd K. Sines, formerly with the Collaborative Project in Cerebral Palsy, has accepted a position as Assistant Professor in the Department of Psychiatry of the University of Minnesota Medical School.

Hope C. Solomons, formerly at Rhode Island College, has been appointed Research Associate in the Department of Neurology at the State University of Iowa.

James T. Suter has been appointed Assistant Chief, Research Grants Branch, Division of Hospital and Medical Facilities, Public Health Service, Department of Health, Education, and Welfare.

W. Dixon Ward, formerly with the American Academy of Ophthalmology and Otolaryngology, Los Angeles, has joined the Department of Otolaryngology of the University of Minnesota as Research Associate Professor, under a Research Career

Development Award from the National Institutes of Health.

Alexander A. Wylie has recently accepted the position of Chief Clinical Psychologist for the Lake Region Mental Health Center, Watertown, South Dakota.

Rudolph L. Zlody, formerly at Duquesne University, has accepted the post of Associate Professor of Psychology at the College of the Holy Cross in Worcester, Massachusetts.

The American Institute for Research has announced the appointment of **Robert M. Gagné** as Director of Research in the Pittsburgh offices.

Batten, Barton, Durstine, & Osborn announces the appointment of **Dik W. Tewdt** as Vice President.

Baylor University announces that **J. Clifton Williams** will succeed **E. O. Wood** as chairman of the Department of Psychology.

The Carnegie Institute of Technology announces that **Bert F. Green, Jr.**, has accepted the position of Professor of Psychology and Head of the Department of Psychology.

Children's Hospital of Pittsburgh announces the appointment of **Bernard Yadoff** as Chief Psychologist; he will also hold the rank of instructor, Department of Pediatrics (Psychology) in the University of Pittsburgh School of Medicine.

Howard L. Roy will succeed **Carl Rankin** as Chairman of the Psychology Department at Gallaudet College.

Harcum Junior College announces the appointment of **Boris Blai, Jr.**, as Director of Admissions and Guidance.

Humboldt State College announces the appointment of **Chester C. Collins** to its Psychology Department.

The Indiana Department of Mental Health has announced the appointment of **Bernard Lubin** as Director of Psychological Services.

The Jewish Vocation Service, Detroit, has appointed **David Orzech** as Research Supervisor.

The Kennedy Child Study Center in Santa Monica has appointed **T. W. Richards** as Chief Psychologist and Director of Research, and **G. Kinsey Stewart** as Senior Psychologist.

Kent State University announces the following appointments to the Department of Psychology for 1962: **Horace A. Page**, formerly at Temple University, as Professor and Director of the Clinic; **Robert E. Morin**, formerly of the University of Arizona, as Associate Professor.

Marquette University has named **Frances M. Douglass** as Chairman of the Department of Psychology for a one-year term beginning July 1, 1962.

Minneapolis-Honeywell Regulator Company announces the appointment of **James T. Freeman**, formerly with the Strategic Air Command, Supervisor of Human Factors and Training Services at the Ordnance Division facility at Duarte, California.

The National Institute of Mental Health, Bethesda, has announced the appointment of **Eli A. Rubinstein** as Assistant Chief of the Training Branch, and the appointment of **Ralph Simon** as Chief of the Program Analysis Section, Training Branch.

Opinion Research Corporation, Princeton, New Jersey, has announced that **Harry W. O'Neill** has joined the staff as survey director.

Richard H. York, formerly with the Massachusetts Department of Mental Health, has joined the staff of Psychological Assessment Associates in Washington, D. C.

Rohrer, Hibler & Replogle announces the appointment of **Paul P. Sidwell** to the staff of their Atlanta office, and the appointment of **Cyril R. Mill** to the Staff of their Minneapolis office.

Southern Illinois University announces that **D. G. Appley** has accepted a position as Director, Department of Psychological Services, York University, Toronto, as of September 1, 1962. The University also announces the following appointments to its Department of Psychology:

Jean Chapman, Lecturer in Psychology; **Loren J. Chapman**, Associate Professor in Psychology; **David Ehrenfreund**, Professor and Chairman of the Psychology Department; **J. Stanley Gray**, Visiting Professor of Psychology.

System Development Corporation has named **Edward Lovinger** to head its newly established Army System Training Branch.

The University of Alberta's Psychology Department announces the appointment for 1962 of **W. N. Runquist**, Associate Professor.

The University of Connecticut has appointed **Bernard Murstein** as Associate Professor of Family Relations.

The University of California at Los Angeles announces the appointment of **F. Nowell Jones** as Chairman of the Department of Psychology, and **Harold H. Kelley** as Vice-Chairman.

The University of Detroit announces that **Dan H. Jones** has been appointed to the staff of the United Nations International Labor Office in Bombay for one year. He will set up a new industrial psychology department in the Indian Central Labor Institute.

Marquette University announces that **George H. Zimny** has accepted a United States Public Health Service postdoctoral fellowship at the Medical Psychology Department of the School of Medicine of Washington University in St. Louis.

North American Aviation, Inc., has announced the following additions to the staff of its Behavioral Sciences Group, Life Sciences Section, of the Columbus, Ohio, Division: **Robert F. Mengelkoch**, **Thomas S. Baldwin**, **Harve E. Rawson**, and **John M. Humes**.

The University of California, Santa Barbara, announces the following new appointments in the Psychology Department:

Jarvis Bastian, **Clifford T. Morgan**, and **Richard de Mille**, Lecturers; **Alice Hawkins**, Assistant Professor; **William B. Michael**, Professor of Education and Psychology; **Cletus J. Burke**, Visiting Professor for the Spring Semester of the academic year 1962-63.

The University of Cincinnati announces that for the academic year 1962 **Leonard M. Lansky** and **William Seeman** will join the staff of the University's Psychology Department as Associate Professors, and **Richard W. Thoreson** and **George D. Wright** have been appointed Assistant Professors. **Cynthia F. Dember** and **Robert B. Mills**, of the

Department of Psychiatry, will undertake teaching assignments in psychology.

The University of Southern California announces the appointment of **Clarence L. Winder** as Professor of Psychology and **Norman Cliff** as Visiting Associate Professor of Psychology. **David B. Klein** will be succeeded by **Georgene Seward** as Director of Clinical Training and **Clarence Winder** as Director of Psychological Services.

The United States Army Personnel Research Office announces the following appointments:

Leonard V. Gordon, formerly with the United States Naval Personnel Research Field Activity in San Diego, Chief, Behavioral Evaluation Research Laboratory.

Philip J. Bersh, formerly at Griffiss Air Force Base, New York, Chief, Combat Systems Research Laboratory.

Carrie Jean Waters, formerly at Pensacola and Ohio State University, has been assigned to the Input Quality Task, Military Selection Laboratory.

Wayne State University announces the following appointments:

Hjalmar Rosen, formerly at the University of Illinois, will be Professor of Psychology.

Ralph Epstein, formerly of the Asthmatic Children Research Center in Denver, has been appointed Assistant Professor in the Psychological Clinic.

Arthur Kornhauser has become Emeritus Professor of Psychology, and **Ross Stagner** has resumed the chairmanship of the Psychology Department.

The following rosters of officers have been announced:

Connecticut State Psychological Society

President: **Ethelyn Klatskin**

President-elect: **Marvin Reznikoff**

Secretary: **O. W. Lacy**

Treasurer: **Lawrence Hemmendinger**

Essex County (New Jersey) Society of Clinical Psychologists in Private Practice

President: **Morris Goodman**

President-elect: **Harry Rockberger**

Secretary: **Doris Kraemer**

Treasurer: **Orian Frey**

Northeast Florida Psychological Association

President: **Dell Lebo**

Vice President: **Claude Thompson**

Secretary-Treasurer: **Clyde Swink**

Puget Sound Psychological Association

President: **Caroline Preston**

President-elect: **James Reilly**

Secretary-Treasurer: **Marian Mowatt**

San Fernando Valley Psychological Association

President: Stewart B. Shapiro
 President-elect: Karl E. Pottharst
 Past President: Charles Ansell
 Secretary-Treasurer: Murray S. Stopol
 Member-at-Large: Mildred Mayne

Wisconsin Psychological Association

President: Herman Weil
 Vice President: Allyn F. Roberts
 Corresponding Secretary: James Rohrer
 Recording Secretary: Asher Pacht
 Treasurer: Herbert Klausmeier

The Moccasin Bend Psychiatric Hospital, Chattanooga, has recently received a grant from the Chattanooga Area Foundation for Research, Training, Treatment, and Teaching in the Mental Health Disciplines, Inc., to sponsor an internship in clinical psychology. The training stipend varies between \$4,000 and \$4,800. For further information and applications for appointment, write to: Frances R. Webster, Director of Psychological Training, Moccasin Bend Psychiatric Hospital, Chattanooga, Tennessee.

The Philadelphia Child Guidance Clinic invites applications for *postdoctoral Fellowships in Clinical Child Psychology*. Requirements include the PhD in clinical psychology and United States citizenship. Fellowships are available under the United States Public Health Service and offer stipends of \$6,000 for the first year, and \$7,000 for the second year. Applications and requests for further information should be sent to: John A. Rose, Director, Philadelphia Child Guidance Clinic, 1700 Bainbridge Street, Philadelphia 46, Pennsylvania.

The National Science Foundation has awarded a grant of \$5,420 to Adelphi College's Department of Psychology to support experiments with fish for undergraduate instruction in learning and motivation.

The National Institute of Mental Health has granted \$18,000 to Carnegie Institute of Technology for a two-year project on computer simulation of clinical decision making. Benjamin Kleinmuntz is the principal investigator.

The United States Office of Education has granted \$57,081 to Rensselaer Polytechnic Institute for a two-year study of characteristics contributing to the

effectiveness of visual demonstrations. George W. Boguslavsky is the principal investigator.

The Society of Sigma Xi and its associated organization, the Scientific Research Society of America (RESA), has announced the award of \$500 to Justin Aronfreed of the University of Pennsylvania to assist in his study of the effects of reinforcement versus control of resources by a model upon children's learning to imitate the model's behavior.

John A. Hammes and R. Travis Osborne, of the University of Georgia, have been awarded an 18-month \$214,100 contract from the Office of Civil Defense, Department of Defense, to investigate minimal survival conditions in community fallout shelters.

The University of California, Los Angeles, announces that F. Nowell Jones has received a grant from the United States Public Health Service in the amount of \$12,950 for a one-year study of interactions among the skin senses. The same agency has awarded a grant of \$13,416 to O. Ivar Lovaas for the first year of a three-year study of verbal control over nonverbal behavior. The National Science Foundation has awarded a grant of \$17,500 to the University to assist Edward C. Carterette in conducting an undergraduate science education program in psychology.

George R. Bach, Institute of Group Psychotherapy, Beverly Hills, has been invited to conduct workshops on "the therapeutic use of aggression" by the Portland, Oregon, Psychological Association, July 4-7; the Alaska Methodist University, Anchorage, October 5-7; the British Columbia Psychiatric Nursing Association, Harrison Hot Springs, October 9-12. One-day seminars are scheduled in St. Louis on August 30, New York City on October 28, and Portland Maine, November 1, 1962.

The American Board on Professional Standards in Vocational Counseling is now known as the American Board on Counseling Services. In January 1963, it plans to publish a *Directory of Approved Counseling Services* which will include some of the agencies previously listed in the *Directory of American Psychological Services*. Applications for listing in the 1963-64 directory must be

received not later than September 3, 1962, and should be sent to: American Board on Counseling Services, Inc., 1605 New Hampshire Avenue, N. W., Washington 9, D. C.

Avco Corporation, Research and Advanced Development Division, Wilmington, Massachusetts, announces the newly formed Human Systems Department with Vladimir A. Sklodowski as Manager; included in this facility are: system personnel and training requirements, human engineering and life support, operational systems test and evaluation.

The Group for the Advancement of Psychiatry has announced the publication of *Medical Uses of Hypnosis*, a 64-page booklet which may be obtained at \$1.00 per copy from the Group for the Advancement of Psychiatry, 104 East 25th Street, New York 10, New York.

The mimeographed transcript of the American Psychiatric Association convention symposium, "Personality Dimensions of Creativity" (Emanuel F. Hammer, Chairman; James T. Farrell and Arthur Miller, discussants), is now available and may be obtained by sending \$1.00 to the Lincoln Institute for Psychotherapy, 340 West 58th Street, New York 19, New York.

The following seminar series was held on the New Mexico Highlands University campus under the sponsorship of the Psychology Department during the Spring Quarter, 1962: March 19-24, Robert Leeper, "Theoretical Problems in Psychology—Perception, Motivation, Learning"; April 4-6, Willard Thurlow, "Problems in Auditory Perception"; May 7-11, Donald Glad, "New Developments in Psychotherapy"; May 28-29, Harry Crow, "Physiological Approaches to Therapy—Brain and Behavior."

The New Mexico State University has made the following announcements:

A new Department of Psychology has been formed in the College of Teacher Education.

Merrell E. Thompson has been awarded the Robert L. Westhafer Award for the most outstanding researcher of the year at the University.

The University has been awarded a contract with the United States Air Force to perform work on "Psychological Correlates of Biodynamic Stress"; Ray A. Craddick will be principal investigator.

The Department of Psychiatry of the New York Medical College Metropolitan Hospital Center announces the availability of internships in clinical psychology at Metropolitan Hospital, New York City. Applications are being accepted for appointments beginning about September 15, 1962. Address inquiries to: Morton Bard, Chief Psychologist, Department of Psychiatry, Metropolitan Hospital, 1901 First Avenue, New York 29, New York.

At the annual graduation exercises of the Postgraduate Center for Psychotherapy, Inc., Thomas S. Szasz was the Commencement speaker. Hyman M. Chernow received certificates for the completion of Analytic Psychotherapy and Analytic Group Psychotherapy, Manfred H. Hecht received a certificate for completing Analytic Psychotherapy, and Malcolm Marks received a certificate for completing Analytic Group Psychotherapy. Gralnick Foundation Awards were given to Malcolm Marks and Gerald Sabath.

The Department of Psychology of the Postgraduate School of the Stuyvesant Polyclinic announces Fall 1962 postdoctoral courses in medical and clinical psychology. Classes begin on Friday, October 12. Application should be made as early as possible since registration is limited. For further information, write to: Arnold Bernstein, Chief, Department of Psychology, Stuyvesant Polyclinic, 137 Second Avenue, New York 3, New York.

Temple University has announced that the Twentieth Annual Reading Institute will be held January 21-26, 1963, to consider "Reading in Curriculum Development." For further information, write to: Bruce W. Brigham, Coordinator of Institute Services, The Reading Clinic, Department of Psychology, Temple University, Philadelphia 22, Pennsylvania.

The University of Southern California has awarded an honorary Doctor of Science degree to J. Paul Guilford.

On June 23, 1962, the University of Southern California and the Human Factors Society, Los Angeles Chapter, jointly sponsored a Human Factors Symposium entitled "Information Processing in Man: Research Frontiers." The program included the following papers. "Rationale for Today's Program," by Mark S. Mayzner; "Complex Behavior in a 'Simple Task,'" by Burt R. Wolin;

"Keeping Track of Several Things at Once: Some Implications for the Coding of Displays," by Douwe B. Yntema; "A Model for Visual Memory Tasks," by George Sperling; "Analysis of Proximities as a Technique for the Study of Information Processing in Man," by Roger N. Shepard.

The United States Information Agency recently awarded its Superior Service Award to **Leo P. Crespi**.

The University of Houston has announced that **Richard I. Evans** has been named Director of the Greater Houston Action for Youth Project. The project is designed to attack juvenile delinquency in Houston by utilizing such resources as social agencies, law enforcement organizations, schools, churches. It will be supported by a \$265,000 grant from the United States Department of Health, Education, and Welfare (HEW) under the Congressional Juvenile Delinquency Control Act. Evans and his University of Houston team of social psychologists, sociologists, cultural anthropologists, communications specialists, and social workers plan to initiate the project in the fall of 1963. At that time HEW will consider their proposal for a second grant of \$3,000,000 for a three-year all-out juvenile delinquency prevention and control program in Houston. Three Houston commercial television stations have agreed to give 31½ hours of prime time to 21 films and video tapes produced by Evans' staff, presentations of case histories of juvenile delinquency, ecological studies of slum areas, and interviews with community leaders and key professional personnel.

The Class of 1962 of Long Beach State College awarded its Professor of the Year trophy to **Roy K. Heintz** in recognition of outstanding services to the Associated Students.

The Institute for Practicing Psychotherapists (IPP) has announced an expanded program for 1962-63. Additions to its faculty include **Edrita Fried**, **Milton Gurvitz**, and **Otto Spranger**. IPP offers advanced level workshops for practicing psychotherapists. Copies of its 1962-63 *Bulletin* may be obtained by writing to the Institute at 140 West 58th Street, New York, New York.

The Committee on Space Efforts and Society of the American Academy of Arts and Sciences is

endeavoring to compile a list of people who have begun *field work or conceptual analysis with reference to the space program or related problems* such as massive technological innovation, exploration as social administrative process, the supply of scientific and engineering manpower. The committee will appreciate hearing from persons engaged in such research. Write to: Committee on Space Efforts and Society, American Academy of Arts and Sciences, 12 Garden Street, Cambridge 38, Massachusetts.

The California State Psychological Association will hold its sixteenth Annual Convention in Los Angeles on December 14-15, 1962, at the Biltmore Hotel. The basic presentations of the program will be on current research problems and applied issues in the form of papers, symposia, and addresses. Several sessions will cover relatively new topics such as automated teaching, computers and psychological research, and human factors research. It is planned to include special panels and invited addresses on issues of special interest to California psychologists. The award for the *annual prize paper competition for graduate students* will be presented; any graduate student enrolled in a California university or college may submit a research paper in the competition under the sponsorship of a CSPA member. For further details about the 1962 CSPA Convention, write to: Roderick H. Bare, Convention Manager, System Development Corporation, 2500 Colorado Avenue, Santa Monica, California.

The twentieth Annual Meeting of the American Psychosomatic Society will be held at Chalfonte-Haddon Hall in Atlantic City on April 27-28, 1963. Interested persons are invited to attend and to submit abstracts of original work for consideration for presentation. Accepted abstracts will be printed and circulated to the membership prior to the meeting, and will be available at a minimal price at the meeting. Abstracts should be submitted, in ten copies, by December 1, 1962, to: Chairman, Program Committee, 265 Nassau Road, Roosevelt, New York.

The British Psychological Society has recently created a class of *foreign affiliates* which is open to members of approved psychological associations. Foreign affiliates will take no part in the government of the Society, but will be entitled to receive

notice of, and to attend, scientific meetings; they will also receive the quarterly *Bulletin*, and, on request, the Memorandum of Appointments. They are also entitled to receive the Society's journals at member rates: *British Journal of Psychology*, 20s; *British Journal of Medical Psychology*, 20s; *British Journal of Educational Psychology*, 20s; *British Journal of Statistical Psychology*, 30s; *British Journal of Social and Clinical Psychology*, 20s; *Australian Journal of Psychology*, 20s. The annual subscription for foreign affiliates is three pounds sterling. Application blanks may be obtained from the APA Central Office in Washington. Each ap-

plication must be certified by the secretary of the psychological association of which the applicant is a member. APA and its affiliated psychological societies have been approved for the purpose of foreign affiliation.

The Third Research Conference on Criminology and Delinquency will be held in Montreal, November 20-24, at the University of Montreal, under the auspices of the Quebec Corrections Society. For further information, write to: Bruno M. Cormier, Third Research Conference on Criminology and Delinquency, 509 Pine Avenue West, Montreal 18, P. Q., Canada.

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This review appears once each year and may include accounts of research in social problems, educational practice, the history of education and theoretical and applied Psychology. It is published by the University of Durham, but submission of papers is not restricted to members of the University. This year's issue, no. 13, appears in September. It is edited by Mr. D. Graham, with the assistance of Professor F. V. Smith, Professor Brian Stanley, Professor J. P. Tuck and Dr. J. L. Dobson of the University of Durham.



The Durham Research Review can be obtained for 80 cents (post free) from The Director, Institute of Education, 19 Leazes Terrace, Newcastle upon Tyne 1, England.

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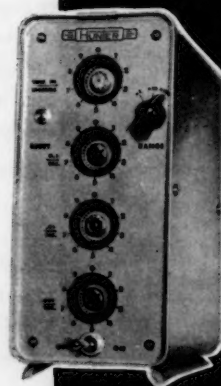
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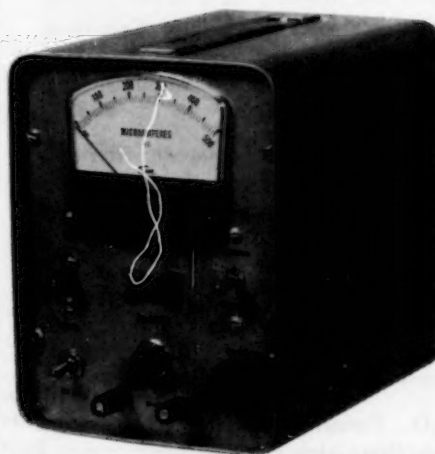
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